Frontispiece.

THE

Gentleman's Farriery:

OR, A

PRACTICAL TREATISE

ON THE

DISEASES of HORSES:

Wherein the best WRITERS on that SUBJECT have been consulted, and

M. LA FOSSE's Method of TREPANNING Glandered Horses

Is particularly considered and improved:

ALSO

A New Method of NICKING HORSES is recommended; with a Copper-Plate and Description of the MACHINE.

To which is added an APPENDIX,

Treating, 1. Of Particular DISORDERS of the FEET. 2. OBSERVATIONS on Shoeing HORSES. With proper CUTS.

By J. BARTLET, SURGEON.

The SEVENTH EDITION, revised.

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LAbitur infelix ſtudiorum, atque immemor herbæ,
Victor equus; fonteſque avertitur, & pede terram
Crebra ferit: demiſſæ aures; incertus ibidem
Sudor & ille quidem morituris frigidus: aret
Pellis, & ad tactum tractanti dura reſiſtit.
Tum vero ardentes oculi; atque attractus ab alto
Spiritus interdum gemitu gravis imaque longo
Ilia ſingultu tendunt: it naribus ater
Sanguis, & obſeſſas fauces premit aſpera lingua.

Virgil. Georgic. Lib. III.

THE

PREFACE.

THE author of the following treatiſe was induced to the undertaking, from the complaints ſo frequently made by gentlemen, of the obſcurity, inaccuracy, and tediouſneſs, too general among the writers on the diſeaſes of horſes. On this account he thought he ſhould make no unacceptable preſent to the public, if he collected from the beſt authors on this ſubject, ſuch particular ſymptoms of diſtempers, *as would lead to the diſcovery of the* real one, *and diſtinguiſh it from others of a ſimilar nature, rejecting all other deſcriptions as uſeleſs ſpeculations. By a due attention to this plan, every gentleman would ſoon judge of the ability of his farrier, ſhould he think proper to conſult one, before he follows the directions here laid down.*

WOULD these practitioners, *instead of ringing the changes with a set of paltry receipts, handed down to them from their ignorant grandsires, but carefully apply themselves to this so useful and necessary branch of knowledge, and industriously collect and compare the* symptoms of particular diseases, *they would attain much more certainty in their practice, and, of course, more safety and expedition in their cures. They would then find that a few simple medicines, judiciously directed in acute cases, would fully answer their intention, by suffering* nature *to co-operate with them; and that the nauseous ill-contrived drenches, so generally made use of, but too often thwart her operations, and prove of worse consequence than the disease itself.*

FOR it is this knowledge of the symptoms *of diseases, that distinguishes the rational physician from the empirical pretender; it is this accounts for the superior ability and judgment which appears between one physician and another; and it is hence only any progress can be made*

made in the healing art; and more particularly in the diſeaſes of horſes, as the ſuffering animals can only deſcribe their pain by their geſtures.

WITH what contempt and indignation then muſt we view ſuch ignorant pretenders blundering about a diſtemper, groping in the dark, and throwing in medicines at random? And what a melancholy ſituation muſt be that of the unhappy victim? The power of nature, or ſtrength of conſtitution, will now and then indeed ſurmount the ignorance of blunderers, and elude the force of their hotch potches; ſo that the doctor ſhall receive applauſes and rewards for his imaginary ſkill, when he deſerves ignominy and the ſevereſt cenſures. But what ſhould we conclude hence? Why only that ſome few conſtitutions, like ſome fortifications, are bomb-proof, and can ſupport the ſhocks of the whole medical artillery, without blowing up.

AND here I cannot but lament the ſtrange ſupineneſs of many gentlemen, who though they are real admirers of

this uſeful animal, and ſpare no expence for the cure of their maladies, yet ſuffer themſelves to be impoſed on by illiterate grooms, and unskilful farriers; who, for the ſake of their own private advantage, are frequently poaching their horſes with drenches, which not only claſh with every intention of cure, but aggravate the diſorder: whereas, would gentlemen but take a little pains (and ſure the ſtudy would be an entertainment) to make themſelves acquainted with the laws of the blood's circulation, and the different ſecretions of the various fluids; they would ſoon be convinced (of what I have before hinted) that injudicious jumbles of drugs are only a load on the conſtitution, and frequently defeat the very intentions of nature; who of herſelf, or with very little aſſiſtance, would in general ſoon work her own deliverance; but when the load of the ſuppoſed remedy is added to the diſeaſe, the oppreſſion becomes too violent for nature long to ſupport; and though the animal has the conſtitution of a horſe, yet muſt it at laſt ſubmit, and fall a ſacrifice to ignorance and blind credu-

lity

lity.—A few leading queſtions would alſo ſoon convince gentlemen of the ſtupidity, but too prevalent among the major part of theſe prating fellows; and ſatisfy them how precarious, if not fatal, muſt be the practice of men, ſo little acquainted with the laws of nature, and of that machine they are ſubverting by their continual blunders. By theſe means alſo the deſerving farrier would have proper juſtice done him, and be diſtinguiſhed from the common herd, by his ſuperior abilities.

PERHAPS it may be no uſeleſs digreſſion to obſerve here, that this would not be the only advantage reſulting from theſe kinds of ſtudies; as gentlemen would thereby be enabled to form a proper judgment of thoſe guardians, with whom they often entruſt their own healths and lives, and diſtinguiſh the ſuperficial loquacious coxcomb in phyſick, from the rational and modeſt practitioner: for in general it may be obſerved, that in proportion to the ſhallowneſs of the ſtream, the bubbling and noiſe is moſt manifeſt, and where the froth of ſcience

only has been ſipped, it is no wonder, as our judicious Satyriſt has obſerved, that ſuch ſhallow draughts ſhould intoxicate the brain. But till gentlemen make this a more general ſtudy, and thereby become better judges of phyſical merit, we muſt not be ſurprized to find them ſometimes impoſed on by ſuch conceited ſmatterers; whoſe cant, though deemed oracular by the credulous, is but too like the oracles of old, ſpecious deluſion, and vile impoſition; where learned impertinence paſſes for ſound erudition, and a barren ſuperfluity of words, for wonderous knowledge and elocution. Thus ſounds are adopted and miſtaken for ſenſe; and impudence and folly but too often triumph over modeſty and true deſert: for as the above-quoted Poet juſtly obſerves,

Diſtruſtful ſenſe with modeſt caution ſpeaks,
But rattling nonſenſe, in full volleys breaks.

BUT to return: It may be neceſſary to inform the reader, that as the

the intention of this treatise was to be as concise as possible, and entirely practical; the immediate causes within, which occasion the disorder, with the most plausible theories relative thereto, are in genral omitted as precarious and delusive; for we apprehend they tend rather to confound, than improve the judgment, and obscure an art that should chiefly be founded on penetrating observation, *and* faithful description. *Indeed, the incertitude that has always appeared in these sort of conjectures, hath now fully convinced the ingenuous of their inutility, and that one Sydenham, one faithful recorder of facts, has merited more, by observing and following nature, painting to the life what his eyes saw, and fingers felt, than all the hypothetical writers united: as a proof of this, we need only recollect the numberless, ridiculous, and inconsistent theories, that have sprung up successively, and which all had their patrons for a time, but dwindled into dispute and oblivion, in proportion to the advances of more plausible conjectures: and this probably will be the fate of all subsequent ones,*

ones, that are not erected on the more solid basis of repeated experience, and sedulous observation.

FOR these reasons particularly we have endeavoured to be as explicit as possible, in enumerating the symptoms, *as laid down by the best authors; esteeming them to be the only true guides that can lead us to the knowledge of the disease, and consequently to the remedy. Should it be thought we have dwelt too long on this part, we must plead the importance of it for our excuse, as we apprehend, by being more concise, the work had been less valuable.*

IT may not be improper here also to acquaint the reader, that this piece was originally drawn up, and intended for the author's own use, to refer to occasionally, and save the trouble of turning over on every occasion the various writers on this subject; and that having been frequently borrowed by his friends, their approbation of the plan, and request, prevailed on him to send it to the press, with some additions.

He is well aware how much he expoſes himſelf to the cenſure of the little criticks, and to the ſneers of the malicious among his brethren; but he begs theſe would remember, that to write pertinently on the diſeaſes of horſes, requires more medical knowledge and ſtudy than may at firſt be apprehended; a parity of reaſoning being requiſite in treating the maladies of horſes and men. And he is convinced, that ſo nearly allied is the true art of farriery to thoſe of phyſick and ſurgery, that it never can be perfected, but on ſimilar principles; and of courſe the ſubject can never be ſo properly handled, as by thoſe who have made thoſe arts their ſtudy. This will evidently appear, by comparing only the two laſt treatiſes in our own language with all that have preceded them: for though many uſeful obſervations and remedies may be picked up from Blunderville, Markham, De Grey, Soleyſel, Gueriniere, Saunier, &c. yet, for the moſt part, their method is irrational, and not founded on a thorough knowledge of the mechaniſm of a horſe, or animal œconomy; their medicines

medicines in general are a ſtrange compound or jumble of various and diſcordant ingredients; ſuitable enough to the then reigning faſhion of prescribing where the falſe pomp of numerous ingredients inhanced their value; but by no means agreeable to the later improvements, or to that juſt ſimplicity that ſo remarkably adorns the practice of modern phyſick and ſurgery.

THE author has no other apology to make for digeſting this piece, and the obſervations and reflections he has interſperſed throughout the whole, than his good intention to reſcue the practice of farriery out of hands that ſo much abuſe it; and to convince gentlemen, that as it is founded on rational principles, it is neither unbecoming their notice, or unworthy their ſtudy: and he thinks he has reaſon, from ſome late attempts, to hope, that it will ſoon become as cuſtomary for gentlemen to go through regular courſes of farriery, as it is for phyſicians and ſurgeons through thoſe of chemiſtry and anatomy.

IT

IT cannot indeed be expected, that our farriers ſhould make any real progreſs in their profeſſion, till they apply themſelves early to the ſtudy of anatomy, and to the diſſections of morbid bodies, and lame horſes: by this method (and this only can do it effectually) a new ſcene of knowledge will be unfolded to them: thus would they rectify their former errors, and be guarded againſt future ones, and taught by theſe very principles of anatomy how to act on one ſteady and uniform plan. But now, through ignorance of the real ſeat of the diſorder, how frequently do they rowel, cauteriſe and apply medicines externally, to parts free from any ailment or grievance whatever, while they neglect the real ſource of the diſorder? And how few from their experience, have made any tolerable uſeful obſervations, ſufficient to deduce the cauſe from the ſymptoms, or form a rational method of cure?

IT has often occured, how advantageous a ſtudy this would prove to an ingenious

ingenious young man of tolerable education; who, by thus acting on rational principles, deduced from such foundations, and devoting his whole time to the making such observations, as would be the natural result of his study and experience, would of course soon render himself so eminently conspicuous over the rest of his brethren as would amply repay him for his labours; for the distinguished light he must appear in to every admirer of that noble animal, would surely excite their generosity to encourage such superior merit, and their gratitude of course to reward it.

WHAT gentleman that would not be highly delighted, and think it a rational entertainment, to have the source and cause of lameness in a favourite horse, evidently pointed out, and demonstrated to him by similar preparations kept by the ingenious anatomist for that purpose? How would old prejudices by this means be banished, and new discoveries supply their places, supported by evident truths, and plain demonstrable facts. It is to this study that modern surgery

ſurgery is indebted, for the great progreſs it has of late years made, and the daily improvements that are ſtill making; and from hence ariſe thoſe real benefits to mankind, which no other art or ſcience can pretend to with equal merit and utility.

BUT till this ſtudy is more patronized among us, we muſt not wonder at the ſlow advances it makes; for the practice and character of a horſe phyſician, or ſurgeon, at preſent ſtands ſo low, in the popular opinion, by which many of our paſſions (our pride in particular) are regulated; that, as has been wittily obſerved, not even a country ſurgeon, who is almoſt ſtarving under a ſcarcity of human patients, will deign to attempt a fortune, by applying his medicinal and chirurgical talents to the ſerviee of this neceſſary ſervant of mankind.

BUT to return, we think it incumbent on us to acknowledge our obligations to Dr. Bracken and Mr. Gibſon's treatiſes on this ſubject, for many ingenious obſerva-

ſervations, and real improvements; and muſt confeſs, that, in our opinion, theſe two gentlemen are the only authors, who have treated the diſeaſes of horſes with propriety, judgment, and method; though perhaps there are few of note, that we have not carefully peruſed, in order to render this treatiſe more complete; but theſe are the chief of thoſe, who have ſucceſsfully contributed to introduce a rational ſyſtem of farriery, and to aſſiſt gentlemen in judging for themſelves in caſes, wherein every perſon of a ſuperior education, with any tolerable ſhare of experience, may at leaſt put himſelf on a footing with the generality of our horſe-doctors. To theſe gentlemen we are indebted for the early and ingenious ſteps they made towards reducing it to a rational ſyſtem; well knowing it was matter of weight enough to engage the moſt ſagacious in the improvement of an art, from which ſo conſiderable a benefit ariſes to the greater part of mankind. To a late modern writer, the Sieur La Foſſe, we are alſo greatly obliged, for the many accurate obſervations and

diſcoveries he has made on this ſubject, and which in the courſe of this work, we have made due acknowledgement of.

TERMS of art, and obſcurity in expreſſion, have purpoſely been avoided as much as poſſible; (though ſometimes the nature of the ſubject has forced us to deviate from our intended plan:) For indeed we are more deſirous of being intelligible to the meaneſt capacity, than ambitious of writing in a poliſhed ſtile, to which we make no pretenſions; and on this account we expect ſome indulgence from the candid reader.

THE receipts, it is hoped, will not be thought too numerous, as their preference to each other is generally pointed out; and as the ingredients of ſome may not always be procurable, it was therefore thought neceſſary to ſubſtitute others in their ſtead. Beſides, the difficulty that occurs in adjuſting the quantities and qualities of various drugs, though a thing familiar and eaſy enough to one acquainted with medicine, would

have greatly embarraſſed the gentleman ſtudent. Should ſome of them be thought too expenſive, we deſire it may be remembered, that, as we have ſtudied to cure in the ſhorteſt method, perhaps there may be little reaſon for complaint in the event, eſpecially when the expence of the deareſt of them is compared with a farrier's bill: Though we have ſeldom directed any of this ſort, without giving the common cheap forms with them; and left the alternative to the circumſtance of the reader, and the value of his horſe.

WE beg leave however to obſerve, that the writers on the diſeaſes of horſes are often too ſanguine in the virtues they aſcribe to particular medicines, and drugs; and too warm in the aſſertions of their particular ſucceſs in their practice and experience. But how are we often diſappointed, when we come to compare theſe obſervations with our own experience! Nor is this ſo much to be wondered at when we reflect that no man by his own practice can acquire a ſufficient knowledge of the virtues of one-tenth

tenth part of the ſimples in uſe, ſo that, of conſequence, writers muſt copy from one another, and report to us many things on tradition.

WHOEVER is at all acquainted with the power of drugs, even from his own experience, knows how extremely difficult it is to aſcertain their medicinal properties; as the ſame individual medicine has different effects, not only in different conſtitutions, and in different diſeaſes, but alſo in different ſtages of the ſame diſeaſe. In ſhort, there are ſo many circumſtances, to which we either do not, or perhaps cannot, ſufficiently attend, which vary their operation and effects, that we are frequently diſappointed in our expectations, even of thoſe medicines with which we are beſt acquainted.

THESE ingenious hints I thought extremely neceſſary, in order to convince gentlemen of the great uncertainty of medicine in general; to the end that they may not be impoſed on by the ſuperficial reaſonings of farriers in general,

THE chapters on Glanders *and* Nicking, *with the Plates and Explanations annexed, it is hoped, will prove both uſeful and entertaining; though we have been informed, that the operation of* Trepanning Glandered Horſes *was attempted in England many years before M. La Foſſe's book was publiſhed; and probably was diſcontinued, for want of a thorough knowledge of the parts affected in this diſeaſe, or from unſucceſsful trials made on horſes, that might be in the laſt ſtages of this diſtemper, and of courſe from the nature of them, incurable; but the ſtrong probability of ſucceſs, in moſt caſes, it is hoped, will now be a ſufficient inducement to follow the method here laid down, till further experience can recommend a better; and be alſo a farther incentive to our induſtry, in bringing to perfection the cure of a diſeaſe, the moſt nauſeous and dangerous to our horſes, and that hitherto has been a reproach to the art of farriery.*

THE chapters on Alteratives *and* Humours, *we hope will be attended to, and particularly the uſe of* Nitre *ſo ſtrongly recommended therein, which by frequent experience, ſince our laſt edition, we have given to the quantity of half a pound a day, or more; particularly in* Fevers, Inflammatory Caſes, *and* Staggers; *nor will it be found leſs uſeful as an alterative, by means of which it is hoped the too frequent uſe of ſtrong purges, may in time be diſcarded; for we doubt not, when gentlemen are once convinced of the nature and power of alteratives, and guarded againſt the abſurd notions of farriers, in relation to humours, the preference will be given to the alteratives, and a practice eſtabliſhed as innocent and ſucceſsful, as that of purging is dangerous and uncertain.*

MANY improvements have been made on a reviſal of this edition for the preſs, and M. La Foſſe having lately publiſhed a treatiſe on the diſeaſes of the feet and ſhoeing horſes, which is eſteemed particularly curious; we have added

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an abſtract of it to this edition, in a diſtinct Appendix.

P. S. *By long experience of the uſe of* Nitre, *it is now recommended to be given in much larger quantities than was at firſt adviſed*; viz. *to three or four ounces for a doſe, and this quantity well diluted with water-gruel may, in fevers, and many caſes, be given thrice a day.*

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THE

Gentleman's Farriery, &c.

CHAP. I.

Some General Directions in regard to Horses.

LET it be laid down as a general rule, to give horses as few medicines as possible; and by no means comply with the ridiculous custom of some, who are frequently *Bleeding*, *Purging*, and giving *Balls*, though their horses are in perfect health, and have no one indication that requires such treatment.

Medicines are improper for horses in health.

Proper management in their *Feeding*, *Exercise*, and *Dressing*, will alone cure many disorders, and prevent most; for the simplicity of a horse's diet, which chiefly consists of grain and herbage, when good in kind, and dispensed with judgment, secures him from those complicated disorders, which are the general

effects of intemperance in the human body.

Foreigners depend more on alteratives than purging medicines

In *France*, *Germany*, and *Denmark*, horſes are ſeldom purged; they depend there much on *Alteratives*; the uſe of the liver of antimony, we have from the *French*, which is in general a good medicine for that purpoſe, and may, in many caſes, often be ſubſtituted in the room of purging.

The beſt hay ſhould be procured.

As *Hay* is ſo material an article in a horſe's diet, great care ſhould be taken to procure the beſt; when it is not extraordinary, the duſt ſhould be well ſhook out, before it is put in the rack; for ſuch hay is very apt to breed vermin.

Caution concerning beans.

Beans afford the ſtrongeſt nouriſhment of all grain, but are fitteſt for laborious horſes; except on particular occaſions. In ſome ſeaſons they breed a kind of vermin called the red bugs, which is thought to be dangerous; the beſt method, in ſuch caſe, is to procure them well dried and ſplit.

Cautions in the uſe of bran.

Bran ſcalded is a kind of *Panada* to a ſick horſe; but nothing is worſe than a too frequent uſe of it, either dry or ſcalded; for it relaxes and weakens the bowels

bowels too much. The bots in young horſes may be owing to too much muſty bran and chaff, given with other foul feed to make them up for ſale: particular care therefore ſhould be taken that the bran be always ſweet and new.

Oats, well ripened, make a more hearty and durable diet than *Barley*, and are much better ſuited to the conſtitutions of *Engliſh* horſes, as appears by experience. A proper quantity of cut ſtraw and hay mixed with them, is ſometimes very uſeful to horſes troubled with bots, indigeſtion, *&c.* Oats the beſt diet for Engliſh horſes.

The method ſome have of giving to young horſes, oats, or peaſe, *&c.* in the ſtraw, is attended, amongſt others, with this inconvenience, that their pulling out the ſtraw, in order to find the corn, teaches them a bad cuſtom, which they never after forget, of pulling moſt of their hay out of the rack into the manger or on the floor, with the ſame expectation. An uſeful remark.

Horſes who eat their litter, ſhould particularly have cut ſtraw and powdered chalk given them with their feed, as it is a ſign of a depraved ſtomach, which wants correcting. Obſervation.

The good properties of salt-marshes.

The *Salt-Marshes* are good pasture, remarkably so for horses who have been surfeited, and indeed for many other disorders; they purge more by dung and urine than any other pasture, and make afterwards a firmer flesh: their water is for the most part brackish, and of course, as well as the grass, saturated with salts from the sea-water.

Seawater, its use.

The great advantages that arise from drinking *Sea-water*, so much recommended (among us) of late, may have taken the hint from the good effects it was observed to produce, in obstinate chronical cases, on morbid horses; who are as frequently sent to the marshes, when all other means are despaired on, as consumptive people are to *Bristol*, and as often recover beyond expectation.

Grass often necessary.

A summer's grass is often necessary; more particularly to horses glutted with food, and who use little exercise, but a month or two's running is proper for most; those especially who have been worked hard and have stiff limbs, swelled legs, or wind-galls. Horses, whose feet have been impaired by quitters, bad shoing, or any other accidents, are also best repaired at grass. Those lamenesses particularly

ticularly require turning out to graſs, where the muſcles or tendons are contracted or ſhrunk; for by the continual gentle exerciſe in the field, with the aſſiſtance of a pattin-ſhoe on the oppoſite foot, the ſhortened limb is kept on the ſtretch, the waſted parts are reſtored to their uſual dimenſions, and the limb again recovers its uſual tone and ſtrength.

What months to be preferred, and why.

Where it can be done with convenience, the paſturing them in *May* and *June* is in general moſt adviſeable: as the graſs in thoſe months is to be preferred; and the ſeaſon is leſs infeſted with flies and heat, which in *July* and *Auguſt* are apt to be very troubleſome; and frequently ſo teaſe and torment a horſe at paſture, that, with ſtamping and kicking, his gourdineſs and wind-galls will often rather be increaſed than diminiſhed.

Cautions with reſpect to paſture.

The *Fields* which lie near great towns, and are much dunged, are not proper paſture for horſes; but, on obſervation, appear very injurious to them, if they feed thereon all the ſummer.

Moſt horſes would be beſt abroad all the year.

Horſes may be kept abroad all the year, where they have a proper ſtable, or ſhed, to ſhelter them from the weather, and

and hay at all times to come to. So treated, they are ſeldom ſick, their limbs always clean and dry; and with the allowance of corn will hunt, and do more buſineſs than horſes kept conſtantly at houſe.

Horſes taken up from graſs how managed.

If, when horſes are taken up from graſs, they ſhould grow hot and coſtive, mix bran and chopt hay with their corn; and give them ſometimes a feed of ſcalded bran for a fortnight, or longer: let their exerciſe and diet be moderate for ſome time, and both increaſed by degrees.

Antimonials and alteratives ſometimes neceſſary.

Equal quantities of antimony and ſulphur, are ſometimes given in their corn or marſhes, to ſweeten the blood, and keep the body open. The liver of antimony is frequently directed for this purpoſe, to the quantity of half an ounce at a time; but it is thought by ſome to ſucceed beſt after the blood has been gradually warmed and fuſed by the above or with antimony and gum-guaiacum, previouſly taken for ten or twelve days.

Caution concerning liver of antimony.

It is worth obſerving, that when this medicine is given in larger quantities, inſtead of promoting a kind moiſture, and free perſpiration through the ſkin, it

ſometimes creates a heat and dryneſs; when therefore a kindly moiſt breathing is not diſtinguiſhed by the feel of the ſkin, on the uſe of this medicine, it muſt be ſuſpended, till this ſalutary evacuation is reſtored by the above remedies.

Should be finely powder'd.

Theſe antimonials ſhould not be given groſsly powdered, as is generally practiſed, but ground very fine; otherwiſe little of them will paſs into the blood, but will ſometimes, when given in large doſes, ſcour themſelves off without entering the maſs at all.

Whatherbage the fitteſt for foiling.

When horſes are *foiled* in the ſtable, care ſhould be taken that the herbage is young, tender, and full of ſap; whether it be green barley, tares, clover, or any thing elſe the ſeaſon produces, and that it be cut freſh once every day at leaſt, if not oftener; for, when herbage is old and fibrous, it is diveſted of the ſap, has a tendency to putrefaction, and frequently cauſes obſtructions in the bowels; which are ſometimes of bad conſequence, unleſs an evacuation is procured, when the dung has often appeared not unlike what has laid a conſiderable time, mellowing and rotting on a dunghill.

Cautions in foiling.

When horſes loſe their fleſh much in foiling, they ſhould in time be taken to a more ſolid diet; for it is not in foiling as in grazing, where, though a horſe loſes his fleſh at firſt, yet, after the graſs has purged him, he ſoon grows fat.

Horſes ſhould be fed in proportion to their work.

No general directions can be laid down for the *feeding* of horſes, but this; that all horſes, who conſtantly work, ſhould be well fed; others ſhould be fed in proportion to their exerciſe, and not kept to certain regular feeds, whether they work or not.

How to prevent their cribbiting.

Young horſes, who have not done growing, muſt be indulged more in their feeding than thoſe come to their maturity; but if their exerciſe is ſo little, as to make it neceſſary to abridge their allowance of hay, a little freſh ſtraw ſhould conſtantly be put in their racks, to prevent their nibling the manger, and turning cribbiters: they ſhould alſo ſometimes be ſtrapped back, in order to cure them of this habit.

Exerciſe recommended.

A due degree of exerciſe is of the utmoſt conſequence to maintain a horſe in perfect health and vigour. But let it be obſerved, that a horſe is never to be rode hard, or put

put on any violent exercise, when he has a belly full of meat or water: move him gently at first, and he will naturally mend his pace.

It is obvious to every one, what care should be taken of a horse after violent exercise, that he cools not too fast, and drinks no cold water, *&c.* for which reason we shall wave particular directions.

The usual method of feeding coach-horses on the road, by giving them bran with a few beans before their oats, is not amiss; because their work makes them perspire so much, that without something of this kind, they would be faint, or apt to grow costive. The *bran* keeps their body open, and the *beans* prevent its scouring, which horses of weak bowels are subject to on a journey. Bran and beans, when proper.

Most horses fed for sale, have the interstices of their muscles so filled with fat, that their true shapes are hardly known. For which reason, a horse, just come out of the *dealer*'s hands, should at first be gently used. He ought to lose blood, and have his diet lowered, though not too much: walking exercise is most proper at first, two hours in a day; in a week Horses newly brought from the dealers, how to be managed.

or

or fortnight two hours at a time, twice a day; after this uſage for a month, bleed him again, and give him two or three times a week ſcalded bran, which will prepare him for purging phyſick, that may now be given ſafely, and repeated at the uſual intervals.

Obſervation. When a horſe comes out of a dealer's hands his cloathing muſt be abated by degrees, and care taken to put him in a moderately warm ſtable: otherwiſe the ſudden tranſition would be attended with the worſt conſequences.

Signs of healthand amendment. It is a certain proof of amendment in a horſe's conſtitution, when his craving after water abates; for while his blood is thick or fizy, his mouth is generally dry and clammy, and his ſecretions imperfect. Another good ſign is, when on exerciſe his ſweating abates, and does not turn white like ſoap lather, but runs off like water: this is in general a ſure ſign that the blood and juices are attennuated and amended: for while they continue in their viſcid ſtate, the ſweats of courſe will be frothy and clammy.

CHAP.

CHAP. II.

Some General Directions in regard to Bleeding, Purging, *&c.*

HORSES who ſtand much in ſtable, and are full fed, require bleeding now and then, eſpecially when their eyes look heavy, dull, red, and inflamed; as alſo, when they feel hotter than uſual, and mangle their hay. Directions concerning bleeding.

Young horſes ſhould be bled when they are ſhedding their teeth, as it takes off thoſe feveriſh heats they are ſubject to at thoſe times. But the caſes that chiefly require bleeding, are colds, fevers of moſt kinds, falls, bruiſes, hurts of the eyes, ſtrains, and all inflammatory diſorders, *&c.* In what caſes uſeful.

It is right to bleed a horſe, when he begins to grow fleſhy at graſs, or at any other time when he looks heavy: and it is generally proper to bleed before purging.

Let your horſe always be bled by meaſure, that you may know what quantity you take away: two or three quarts is always To bleed always by meaſure.

always enough at one time; when you repeat it, allow for the diſorder, and the horſe's conſtitution.

Obſervation. Let the blood, when cold, be carefully examined, both as to colour and conſiſtence, whether black, florid, ſizy, *&c.*

Cautions concerning purging. Purging is often neceſſary in groſs full horſes, in ſome diſorders of the ſtomach, liver, *&c.* but ſhould be directed with caution. Before a purge is given to any horſe, it is neceſſary ſome preparation ſhould be made for it, in order to render the operation more ſafe and efficacious; thus a horſe that is full of fleſh ſhould firſt be bled, and at the ſame time have his diet lowered for a week, eſpecially thoſe that have been pampered for ſale; ſeveral maſhes of ſcalded bran ſhould alſo previouſly be given, in order to open the bowels, and unload them of any indurated excrement; which ſometimes proves an obſtacle to the working of the phyſick, by creating great ſickneſs and griping.

Remarkable obſervations. Let it be remembered that a horſe is purged with difficulty; that the phyſick generally lies twenty-four hours in the guts before it works; and that the tract of bowels it has to paſs through, is above thirty

thirty yards: and lying horizontally, consequently reſinous and other improper drugs may, and often do, by their violent irritations, occaſion exceſſive gripings and cold ſweats, ſhave off the very mucus or lining of the guts, and bring on inflammations, which often terminate in mortifications, and death.

It is remarkable too, that the ſtomach and guts of a horſe are but thin, compared to ſome other animals of the ſame bulk, and therefore muſt be more liable to inflammation and irritation.

Horſes kept much in the ſtable, who have not the proper benefit of air and exerciſe, in proportion to their food, ſhould in *Spring* have a mild purge or two, after a previous preparation by bleeding, lowering their diet, and ſcalded maſhes. Purges, when proper.

Horſes that fall off their ſtomach, whether it proceeds from too full feeding, or ingendering crudities and indigeſted matter, ſhould have a mild purge or two. Caſes that require it moſt.

Horſes of a hot temperament will not bear the common aloetic purges; their phyſick therefore ſhould be mild and cooling.

Purging

Purging is always found very beneficial in ſtubborn dry coughs; but mild mercurials joined with them, make them yet more efficacious.

Horſes that have thoſe ſorts of lameneſſes, that are ſaid to proceed from *humours* flying about (which are of the *rheumatic* kind, and in young horſes proceed from ſizy blood, and occaſion lameneſs in every limb) require frequent purging; and ſhould alſo have, between whiles, medicines that attenuate and thin the fluids.

Horſes of a watery conſtitution, who are ſubject to ſwelled legs, that run a ſharp briny ichor, cannot have the cauſes removed any ways ſo effectually as by purging.

The firſt purge you give to a horſe ſhould be mild, in order to know his conſtitution.

Some miſtakes concerning purges.

It is a miſtaken notion, that if a proper-prepared purge does not work to expectation, the horſe will be injured by it; for though it does not paſs by ſtool, its operation may be more efficacious, as an alterative, to purify the blood, and

it

it may pass by urine, or other secretions.

Purging medicines are very successfully given in small quantities, mixed with others; and act then as alteratives.

If mercurial physick is given, care should be taken that it be well prepared; and warmer cloathing, and greater circumspection is then required. Cautions.

Purges should be given early in the morning upon an empty stomach: about three or four hours after the horse has taken it, he should have a feed of scalded bran; and a lock or two of hay may then be put into his rack. The same day give him two more mashes; but should he refuse warm meat, he may be allowed raw bran. The manner of giving purges and working off.

All his water should be milk warm, and have a handful of bran squeezed in it; but if he refuses to drink white water, give it him without bran.

Early the next morning, give him another mash; but, if he refuses to eat it, give him as much warm water as he will drink: let him be properly cloathed, and rode gently about. This should be done

two

two or three times a day, unleſs he purges violently, and then once or twice will be ſufficient: at night give him a feed of oats mixid with bran.

During the working, a horſe ſhould drink plentifully; but, if he will not drink warm water, he muſt be indulged with cold, rather than not drink at all.

We ſhall here inſert ſome general forms of purges.

Forms of purges.

TAKE Succotrine aloes ten drams, jalap and ſalt of tartar each two drams, grated ginger one dram, oil of cloves thirty drops; make them into a ball with ſyrup of buckthorn.

Or,

TAKE aloes and cream of tartar each one ounce, jalap two drams, cloves powdered one dram, ſyrup of buckthorn a ſufficient quantity.

Or,

The following, which has an eſtabliſhed character among ſportſmen.

TAKE aloes, from ten drams to an ounce and a half, myrrh and gin-

ger powdered each half an ounce, saffron and oil of aniseed each half a dram.

Mr. Gibson recommends the following.

TAKE Succotrine aloes ten drams, myrrh finely powdered half an ounce, saffron and fresh jalap in powder, of each a dram; make them into a stiff ball with syrup of roses, then add a small spoonful of rectified oil of amber.

Observation.

The Succotrine aloes should always be preferred to the Barbadoes, or Plantation aloes, though the latter may be given to robust strong horses, but even then should always be prepared with the salt, or cream of tartar; which by opening its parts, prevent its adhesion to the coats of the stomach and bowels; from whence horrid gripings, and even death itself, has often ensued. This caution is well worth remarking, as many a horse hath fell a sacrifice to the neglect of it.

Half an ounce of Castile soap, to a horse of a gross constitution, may be added to any of the above; and the proportions may be increased for strong horses.

How mercurials should be given.

When mercurial phyſic is intended, give two drams of calomel over night, mixed up with half an ounce of a diapente, and a little honey, and the purging ball the next morning.

The following, when it can be afforded, is a very gentle and effectual purge, particularly for fine delicate horſes; and if prepared with the Indian rhubarb, will not be expenſive.

A mild purge.

TAKE of the fineſt Succotrine aloes one ounce, rhubarb powdered half an ounce or ſix drams, ginger grated one dram; make into a ball, with ſyrup of roſes.

The following purging drink may be given with the utmoſt ſafety: it may be quickened or made ſtronger, by adding an ounce more of ſena, or two drams of jalap.

A cooling purging drink.

TAKE ſena two ounces, infuſe it in a pint of boiling water two hours, with three drams of ſalt of tartar; pour off, and diſſolve in it four ounces of Glauber ſalts, and two or three of cream of tartar.

This

This laſt phyſic is cooling, eaſy, and quick in its operation; and greatly preferable in all inflammatory caſes to any other purge, as it paſſes into the blood, and operates alſo by urine. Obſervation.

When horſes loſe their appetites after purging, it is neceſſary to give them a warm ſtomach drink, made of an infuſion of camomile flowers, aniſeeds, and ſaffron: or the cordial ball may be given for that purpoſe. Remedies for over-purging.

Should the purging continue too long, give an ounce of diaſcordium in a pint of Port wine, and repeat it once in twelve hours, if the purging continues. Plenty of gum Arabic water ſhould alſo be given, and in caſe of violent gripes, fat broth glyſters, or tripe liquor, ſhould be often thrown up, with an hundred drops of laudanum in each.

The Arabic ſolution may be thus prepared.

TAKE of gum Arabic and tragacanth of each four ounces, juniper berries and caraway ſeeds of each an ounce, cloves bruiſed half an ounce; ſimmer gently in a gallon of water, till Drink for gripes.

the gums are diſſolved: give a quart at a time in half a pail of water: but if he won't take it freely this way, give it him often in a horn.

When a horſe ſwells.

When a purge does not work, but makes the horſe ſwell and refuſe his food and water; which is ſometimes the effect of bad drugs, or catching cold; warm diuretics are the only remedy; of which the following are recommended.

A diuretic drink.

TAKE a pint of white wine, nitre one ounce, mix with it a dram of camphor diſſolved in a little rectified ſpirit of wine; then add two drams of oil of juniper, and the ſame quantity of unrectified oil of amber, and four ounces of honey, or ſyrup of marſh-mallows.

Or,

A diuretic ball.

TAKE Venice turpentine one ounce, incorporate with the yolk of an egg: nitre one ounce: then add juniper berries, and freſh aniſeeds pounded, each half an ounce, unrectified oil of amber two drams; make into a ball with ſyrup of marſh-mallows.

Obſervation.

When a horſe ſwells much with phyſick, do not ſuffer him to be rode about till

till he has ſome vent, but rather lead him gently in hand, till ſome evacuation is obtained.

Horſes drinks to be made palatable.

As it is obſerved, that horſes more willingly take ſweet and palatable things, than thoſe that are bitter and of an ill taſte, care ſhould be taken that the latter are given in balls, and that their drinks are always contrived to be as little nauſeous as poſſible, and ſweetened either with honey or liquorice. Thoſe that are prepared with the groſs powders, are by no means ſo agreeable to a horſe, as thoſe made by infuſion: as the former often clam the mouth, irritate the membranes about the palate and throat, and frequently occaſion the cough they are intended to prevent.

Horſes balls ſhould not be too large.

Balls ſhould be of an oval ſhape, and not exceed the ſize of a pullet's egg: when the doſe is large, it ſhould be divided into two; and they ſhould be dipt in oil, to make them ſlip down the eaſier.

As we have given ſome general forms of purges, we ſhall obſerve the ſame rule in regard to glyſters, with ſome few cautions and remarks.

Horſes ſhould be raked before their glyſters.

Let it be obſerved then, that before the adminiſtering emollient glyſters in coſtive diſorders, a ſmall hand well oiled ſhould be paſſed up the horſe's fundament, in order to bring away any hardened dung, which otherwiſe would be an obſtacle to the glyſter's paſſage.

A pipe and bag preferable to a ſyringe.

A bag and pipe of a proper form, is to be preferred to a ſyringe, which throws up the glyſter with ſo much force, that it often ſurprizes a horſe, and makes him reject it as faſt as it goes in: whereas the liquor, when preſſed gently from the bag, gives him no ſurprize or uneaſineſs, but paſſes eaſily up into the bowels, where it will ſometimes remain a long time, and be extremely uſeful, by cooling and relaxing them; and will ſometimes incorporate ſo with the dung, as not eaſily to be diſtinguiſhed from the other contents of the guts. Theſe emollient glyſters are extremely ſerviceable in moſt fevers, and greatly preferable to purging ones; which in general are too pungent, and ſtimulate too much, eſpecially if aloes are a part of the compoſition.

Nutritive glyſters.

Nutritive glyſters are very neceſſary, and often ſave a horſe from ſtarving, when his

his jaws are ſo locked up by convulſions, that nothing can be conveyed by the mouth.

They ſhould not exceed a quart or three pints at a time, but be often repeated: nor ſhould they be too fat; but made of ſheeps heads, trotters or any other meat broth, milk pottage, rice-milk ſtrained, and many other ſuch nouriſhing things. For an emollient glyſter, take the following. Their quantity.

TAKE marſh-mallows and chamomile flowers each a large handful, bay-berries and ſweet fennel ſeeds bruiſed, each an ounce: boil in a gallon of water to three quarts, pour off into a pan, and diſſolve it in half a pound of treacle, and a pint of linſeed oil, or any common oil. An emollient glyſter.

To make it more laxative, add four ounces of lenitive electuary, or the ſame quantity of cream of tartar, or common purging ſalts.

TAKE two or three handfuls of marſh-mallows, ſena one ounce, bitter apple half an ounce, bay-berries and aniſeed bruiſed, each an ounce, ſalt of tartar half an ounce; boil a A purging glyſter.

quarter of an hour in three quarts of water, pour off, and add four ounces of ſyrup of buckthorn, and half a pint of oil.

Obſervation. This glyſter will purge a horſe pretty briſkly, and may be given ſucceſsfully, when an immediate diſcharge is wanting; eſpecially in ſome fevers with inflamed lungs; or other diſorders, which require ſpeedy relief.

Caution. But it is neceſſary to caution againſt a ſolution of courſe aloes for this purpoſe, as it has been found to gripe horſes violently, and excite feveriſh and ſometimes convulſive ſymptoms; and indeed all pungent and ſtimulating medicines, as the ſtronger purgatives generally are, ſhould be given in this form with great caution.

Obſervation. But the generality of emollient glyſters, may be prepared with much leſs trouble; as two quarts of water-gruel, with half a pound of treacle, a pint of oil, and a handful of common ſalt, will as effectually anſwer every purpoſe. The following is a reſtringent glyſter.

TAKE

TAKE pomegranate bark, or oak bark, two ounces, red roſe leaves, freſh or dry, a handful, balauſtines an ounce; boil in two quarts of water, till one is near conſumed; pour off and diſſolve in it four ounces of diaſcordium; to which may be added a pint of Port wine. A reſtringent glyſter.

This will anſwer in all common caſes, where reſtringents are neceſſary, but ſhould never be given in larger quantities; for the longer glyſters of this kind lie in the bowels, the more efficacious they are.

CHAP. III.

Of COLDS.

AS the ſource of the generality of fevers, coughs, and many other diſorders, that both men and horſes are ſubject to, ariſe originally from taking cold; I have made that diſorder the ſubject of my firſt chapter, as introductory to the ſubſequent ones, to *Fevers*, *Pleuriſy*, *Coughs*, &c. Cold the firſt ſource of moſt fevers.

The

Perſpiration. The doctrine of perſpiration (which one could wiſh in general better underſtood, becauſe it is ſo principally concerned in moſt acute diſorders) is now ſo evidently demonſtrable, that I am almoſt tempted to explain it, ſo far at leaſt, as would give my readers a general idea thereof, and of the conſequence of its ſuppreſſion, or being checked: but as it would be breaking through the limits we have preſcribed ourſelves, muſt deſire they would have recourſe, for farther ſatisfaction on that head, to *Chambers's Dictionary*, Art. *Perſpiration*.

Taking coldwhat. By taking cold then, we mean that the pores and outlets of the ſkin (which in a natural healthy ſtate of body are continually breathing out a fine fluid, like the ſteam ariſing from hot water, or ſmoke from fire) are ſo far ſhut up, that theſe ſteams, or perſpirable matter, not having a free paſſage through them, are hindered from going off in the uſual manner, the conſequence of which is, their recoiling on the blood, vitiating its quality, overfilling the veſſels, and affecting the head, glands or kernels of the neck and throat, the lungs and other principal parts.

To enumerate the various cauſes of colds, would be endleſs; the moſt uſual are, riding horſes till they are hot, and ſuffering them to ſtand in that condition, where the air is cold and piercing; removing a horſe from a hot ſtable to a cold one, and too ſuddenly changing his cloathing; hence it is, that horſes often catch ſuch ſevere colds, after they come out of dealers hands; and by not being carefully rubbed down, when they come in hot, off journeys. The cauſes.

The ſigns of a horſe's catching cold are, a cough, heavineſs and dulneſs, which affect him, more or leſs, in proportion to the ſeverity of it; the eyes are ſometimes moiſt and watery, the kernels about the ears and under the jaws ſwell, the noſe gleets, and he rattles in his breathing; and when the cold is violent, the horſe will be feveriſh, his flanks work, and he will both loath his hot meat, and refuſe his water. When theſe laſt ſymptoms are attended with a ſlimy mouth, ears and feet cold, and a great inward ſoreneſs, there is danger of a bad fever. The ſymptoms.

But when the horſe coughs ſtrong, ſnorts after it, is but little off his ſtomach, pricks up his ears, and moves briſkly in his Good ſymptoms.

his ſtall, dungs and ſtales freely, his ſkin feels kindly, and his coat does not ſtare, he is in no danger, and there will be no occaſion for medicines of any kind; but you ſhall bleed him about two quarts, keep him warm, and give him feeds of ſcalded bran, with as much warm water as he will drink, in order to dilute his blood.

The cure. If the diſorder ſhould increaſe, the horſe feel hot, and refuſe his meat, bleed him, if a ſtrong one, two quarts more; and if you are not ſatisfied, without giving medicines, avoid, as you would poiſon, a farrier's drench (which is generally compoſed of ſome hot, nauſeous powders, given in a quantity of ale; which too often increaſes the fever, by overheating the blood, and palls the horſe's ſtomach by its loathſomeneſs.) And inſtead of it, infuſe two ounces of aniſeeds, with a dram of ſaffron, in a pint and a half of boiling water; pour off the clear, and diſſolve it in four ounces of honey; to which may be added four ſpoonfuls of ſallad oil: this drink may be given every night; or one of the following balls, provided there is no fever; in which caſe, it always will be more eligible to give two, ot three ounces of nitre, or ſalt prunella every day in his feeds,

feeds, or water, till it is removed; this method of treating colds we have explained, in our animadverſions on nitre, and the great efficacy of this medicine; but ſhould the horſe be inclined to coſtiveneſs, remember that his body ſhould be kept open by emollient glyſters, or cream of tartar diſſolved in his water, to the quantity of three or four ounces a day.

The pectoral horſe ball.

TAKE of the freſh powders of aniſeed, elicampane, caraway, liquorice, turmerick, and flower of brimſtone, each three ounces, juice of liquorice four ounces, diſſolved in a ſufficient quantity of mountain, ſaffron powdered half an ounce, ſallad oil and honey, each half a pound, oil of aniſeed one ounce: mix together with wheat flower enough to make them into a paſte.

Or, Take the following from Dr. BRACKEN.

The cordial ball.

TAKE aniſeed, caraway ſeed, and greater cardamoms, finely powdered, of each one ounce, flower of brimſtone two ounces, turmerick in fine powder one ounce and a half, ſaffron two drams, Spaniſh

juice diſſolved in water, two ounces, oil of aniſeed half an ounce, liquorice-powder one ounce and a half, wheat-flower, a ſufficient quantity, to make into a ſtiff paſte, by beating all the ingredients well in a mortar.

Obſervations on them. Theſe balls conſiſt of warm opening ingredients; and given in ſmall quantities, about the ſize of a pullet's egg, will encourage a free perſpiration; but in caſe of a fever, ſhould be cautiouſly continued. They are much more efficacious, and in all caſes ſuperior to the farriers drenches, if diſſolved in a pint of warm ale.

General obſervations. This ſimple method, with good nurſing and hot maſhes, warm water and cloathing, eſpecially about the head and throat, which promotes the running at the noſtrils, will anſwer the moſt ſudden colds; and when the horſe feeds heartily, and ſnorts after coughing, moderate exerciſe every day will haſten his recovery.

Particular ones. The ſcalded bran ſhould be put hot into the manger, for the ſteams conduce not a little to promote a running at the noſe, which is often very plentiful, and greatly

greatly forwards the cure. His manger ſhould be kept clean, by filling it with ſtraw; his hay well ſhook and ſprinkled with water, and given in ſmall quantities: for his breathing, at this time, taints the hay, and then he will not touch it.

To a horſe loaded with fleſh, a rowel may ſometimes be neceſſary; as may alſo a gentle purge or two, to ſome, when the diſtemper is gone off.

CHAP. IV.

Of FEVERS *in general.*

AS I purpoſely avoid giving deſcriptions of diſeaſes, or ſo much as gueſſing at the cauſes within, which bring them about, I ſhall immediately enter upon the ſymptoms which denote a ſimple fever preſent. Theſe are great reſtleſs-neſs, the horſe ranging from one end of his rack to the other; his flanks beat; his eyes are red and inflamed; his tongue parched and dry; his breath is hot, and ſmells ſtrong; he loſes his appetite, and nibbles his hay, but don't chew it, and is frequently ſmelling to the ground; the whole

The ſymptoms of fever.

whole body is hotter than ordinary (though not parched, as in ſome inflammatory diſorders;) he dungs often, little at a time, uſually hard, and in ſmall bits; he ſometimes ſtales with difficulty, and his urine is high coloured; his flanks beat, and he ſeems to thirſt, but drinks little at a time, and often; his pulſe beats full and hard, to fifty ſtrokes and upwards in a minute.

The method of cure.

The firſt intention of cure is bleeding, to the quantity of two or three quarts, if the horſe is ſtrong, and in good condition; then give him a pint of the following drink four times a day; or an ounce of nitre, mixed up into a ball with honey, may be given thrice a day, inſtead of the drink, and waſhed down with three or four horns of any ſmall liquor.

The fever balls and drink.

TAKE of baum, ſage, and camomile flowers, each a handful, liquorice-root ſliced half an ounce, ſal. prunel, or nitre, three ounces; infuſe in two quarts of boiling water; when cold, ſtrain off, and ſqueeze into it the juice of two or three lemons, and ſweeten with honey.

A remark.

As the chief ingredient to be depended on in this drink is the nitre, it may perhaps

haps be as well given in water alone; but as a horſe's ſtomach is ſoon palled, and he requires palatable medicines, the other ingredients may in that reſpect have their uſe. Soleyſel for this purpoſe adviſes two ounces of ſalt of tartar, and one of ſal armoniac to be diſſolved in two quarts of water, and mixed with a pail of common water, adding a handful of bran or barley flower to qualify the unpleaſant taſte: this may be given every day, and is an uſeful medicine.

The following alſo may be given for this purpoſe.

A fever drink, or neutral mixture.

TAKE Ruſſia pearl-aſhes one ounce, diſtilled vinegar one pint, ſpring water two pints, honey four ounces: give a pint three or four times a day.

This neutral mixture, and the nitre drink above, may be taken alternately; they are both efficacious remedies, and in ſome places may properly enough be joined with the camphor drink, p. 41.

The diet in fevers.

His diet ſhould be ſcalded bran, given in ſmall quantities; which, if he refuſes, let him have dry bran ſprinkled with water: put a handful of picked hay into

the rack, which a horſe will often eat, when he will touch nothing elſe: his water need not be much warmed, but ſhould be given often, and in ſmall quantities: his cloathing ſhould be moderate, too much heat and weight on a horſe being improper in a fever; which ſcarce ever goes off in critical ſweats (as thoſe in the human body terminate) but by ſtrong perſpiration.

Obſervation. If in a day or two he begins to eat his bran, and pick a little hay, this method with good nurſing will anſwer; but if he refuſes to feed, more blood ſhould be taken away, and the drinks continued; to which may be added two or three drams of ſaffron, avoiding at this time all hotter medicines. The following glyſter ſhould be given, which may be repeated every day, eſpecially if his dung is knotty and dry.

The emollient glyſter. TAKE two handfuls of marſh-mallows, and one of camomile flowers; fennel-ſeed an ounce; boil in three quarts of water to two, ſtrain off, and add four ounces of treacle, and a pint of linſeed oil, or any common oil.

Two

Two quarts of water-gruel, fat broth or pot-liquor, with the treacle and oil, will anſwer this purpoſe; to which may be added a handful of ſalt. Theſe ſort of glyſters are properer than thoſe with purging ingredients. Remarks.

The following opening drink is very effectual in theſe fevers, and may be given every other day, when the glyſters ſhould be omitted: but the nitre balls or drink may be continued, except on thoſe days theſe are taken.

TAKE of cream of tartar and Glauber ſalts, each four ounces; diſſolve in barley-water, or any other liquor: an ounce or two of lenitive electuary may be added, or a dram or two of powder of jalap, to quicken the operation in ſome horſes. An opening fever drink.

Four ounces of Glauber ſalts, or cream of tartar, with the ſame quantity of lenitive electuary, may be given for the ſame purpoſe, if the former ſhould not open the body ſufficiently. Others for that purpoſe.

In four or five days the horſe generally begins to pick his hay, and has a ſeeming reliſh to food; though his flanks The ſigns of recovery.

will heave pretty much for a fortnight: yet the temper of his body, and return of appetite, ſhew that nothing more is requiſite to complete his recovery, than walking him abroad in the air, and allowing plenty of clean litter to reſt him in the ſtable.

Practical obſervations.

This method of treating a fever is ſimple, according to the laws of nature; and is confirmed by long experience, to be infinitely preferable to the hot method.

The intention here is to leſſon the quantity of blood, promote the ſecretions of urine and perſpiration, and cool and dilute the fluids in general.

An uſeful reflection.

How far vinous cordials, ſtrong beer-drinks loaded with fiery powders, and ſuch methods, are likely to anſwer theſe purpoſes, is ſubmitted to the judicious obſerver; as alſo, whether adopting the cool one in its ſtead is not as real an improvement in farriery as phyſick.

A compound fever.

There is another ſort of fever that horſes are ſubject to, of a more complicate and irregular nature than the former; which, if not properly treated, often proves fatal.

The

The ſigns are a ſlow fever, with languiſhing and great depreſſions; the horſe is ſometimes inwardly hot, and outwardly cold; at other times hot all over, but not to any extreme; his eyes look moiſt and languid; he has a continual moiſture in his mouth, which is the reaſon he ſeldom cares to drink, and when he does, it is but little at a time. He feeds but little, and leaves off as ſoon as he has eat a mouthful or two; he moves his jaws in a feeble, looſe manner, with an unpleaſant grating of his teeth; his body is commonly open; his dung ſoft and moiſt, but ſeldom greaſy; his ſtaling is often irregular, ſometimes little, at other times profuſe, ſeldom high-coloured, but rather pale, with little or no ſediment. The ſymtoms.

When a horſe's appetite declines daily, till he refuſes all meat, it is a bad ſign. When the fever doth not diminiſh, or keep at a ſtand, but increaſes, the caſe is then dangerous. But when it ſenſibly abates, and his mouth grows drier, the grating of his teeth ceaſes, his appetite mends, and he takes to lay down (which perhaps he has not done for a fortnight) theſe are promiſing ſigns. A horſe in theſe fevers always runs at the noſe, but not

the kindly white diſcharge, as in the breaking of a cold, but of a reddiſh or greeniſh duſky colour, and of a conſiſtence like glue, and ſticks like turpentine to the hair on the inſide of the noſtrils: if this turns to a gleet of clear thin water, the horſe's hide keeps open, and he mends in his appetite; theſe are certain ſigns of recovery.

The farrier ſhould ſometimes be conſulted.

The various and irregular ſymptoms that attend this ſlow fever, require great ſkill to direct the cure, and more knowledge of the ſymptoms of horſes diſeaſes, than the generality of gentlemen are acquainted with. The experienced farrier ſhould therefore be conſulted and attended to, in regard to the ſymptoms; but very ſeldom as to the application of the remedy, which is generally above their comprehenſion; though it may be readily ſelected, by duly attending to the obſervations here inculcated.

The cure.

Firſt then, a moderate quantity of blood, not exceeding three pints, may be taken away, and repeated in proportion to his ſtrength, fulneſs, inward ſoreneſs, cough, or any tendency to inflammation. After this, the fever-drink, p. 32. may be given, with the addition of an ounce of ſnake-root, and three

three drams of saffron and camphor, dissolved first in a little spirit of wine; the quantity of the nitre may be lessened, and these increased, as the symptoms indicate.

The diet. The diet should be regular; no oats given, but scalded, or raw bran sprinkled; the best-flavoured hay should be given by handfuls, and often by hand, as the horse sometimes cannot lift up his head to the rack.

Dilution necessary. As drinking is so absolutely necessary to dilute the blood, if the horse refuses to drink freely of warm water or gruel, he must be indulged with having the chill only taken off, by standing in the stable; nor will any inconvenience ensue, but oftener an advantage: for the nauseous warmth of water, forced on horses for a time, palls their stomachs, and takes away their appetites, which the cold water generally restores.

When the fever increases. Should the fever after this treatment increase, the horse feed little, stale often, his urine being thin and pale, and his dung sometimes loose, and at other times hard; should the moisture in his mouth continue, his skin being sometimes dry, and at others moist, with his coat looking

ſtaring, and ſurfeited. Upon theſe irregular ſymptoms, which denote great danger, give the following balls, or drink; for in theſe caſes there is no time to be loſt.

The compound fever balls.

TAKE of contrayerva-root, myrrh, and ſnake-root powdered, each two drams, ſaffron one dram, mithridate or Venice treacle half an ounce; make into a ball with honey, which ſhould be given twice or thrice a day, with two or three horns of an infuſion of ſnake-root, ſweetened with honey; to a pint and a half of which may be added, half a pint of treacle water, or vinegar, which latter is a medicine of excellent uſe, in all kinds of inflammatory and putrid diſorders, either external or internal.

Should theſe balls not prove ſucceſsful, add to each a dram of camphor, and where it can be afforded, to a horſe of value, the ſame quantity of caſtor. Or, the following drink may be ſubſtituted in their ſtead for ſome days.

The fever drink.

TAKE of contrayerva and ſnake-root, of each two ounces, liquorice-root ſliced one ounce, ſaffron two drams;

infuſe in two quarts of boiling water cloſe covered for two hours, ſtrain off, and add half a pint of diſtilled vinegar, four ounces of ſpirit of wine, wherein half an ounce of camphor is diſſolved, and two ounces of mithridate or Venice treacle; give a pint of this drink every four, ſix, or eight hours.

A more ſimple drink and perhaps full as efficacious may be thus prepared.

TAKE camphor one dram diſſolved in rectified ſpirit of wine one ounce, then gradually pour on a pint of diſtilled vinegar warmed, and give for two doſes. The quantity of camphor may be increaſed. The camphor drink.

Should the horſe be coſtive, recourſe muſt be had to glyſters, or the opening drink: ſhould he purge, take care not to ſuppreſs it, if moderate; but if, by continuance, the horſe grows feeble, add diaſcordium to his drinks, inſtead of the mithridate; if it increaſes, give more potent remedies. Obſervation.

Let it be remembered, that camphor is a very powerful and effectual medicine, in theſe kinds of putrid fevers; being both

both active and attenuating, and particularly calculated to promote the ſecretions of urine and perſpiration: it has been long celebrated in malignant fevers, as it gives motion to ſtagnant humours, in the moſt diſtant parts, and promotes their expulſion by the common outlets; nitre may be advantageouſly joined with it in many caſes. Theſe are the medicines that are chiefly to be depended on in putrid epidemic fevers, where the circulation is ſlow and languid, the blood and juices tending to coagulate, putrefy, and run into grumes.

Obſervation. A horſe ſhould drink plentifully to promote the operation of theſe medicines; but inſtead of them to a horſe of ſmall value, give an ounce of diapente, and half an ounce of mithridate, and one dram of camphor, with a ſtrong infuſion of rue, ſcordium, and ſnake root, in the manner as above directed.

Symptoms to be regarded. Regard ſhould alſo be had to his ſtaling; which if in too great quantities, ſo as manifeſtly to depreſs his ſpirits, ſhould be controuled by proper reſtringents, or by preparing his drinks with lime-water. If, on the contrary, it happens that he is too remiſs this way, and ſtales ſo little as to occaſion a full-

neſs, and ſwelling of the body and legs, recourſe may be had to the following, drink:

A drink to promote urine.

TAKE of ſalt prunel, or nitre, one ounce; juniper berries, and Venice turpentine, of each half an ounce; make into a ball with oil of amber.

Give him two or three of theſe balls, at proper intervals, with a decoction of marſhmallows, ſweetened with honey.

Badſymptoms in fevers.

But if, notwithſtanding he method we have laid down, a greeniſh or reddiſh gleet is diſcharged from his noſtrils, with a frequent ſneezing: if he continues to loſe his fleſh and becomes hide bound; if he altogether forſakes his meat, and daily grows weaker: if he ſwells about the joints, and his eyes look fixed and dead; if the kernels under his jaws ſwell, and feel looſe; if his tail is raiſed and quivers; if his breath ſmells ſtrong, and a purging enſues with a diſcharge of fœtid dark coloured matter: his caſe may then be looked on as deſperate, and all future attempts to ſave him will be fruitleſs.

The

Signs of a horſe's recovery.

The ſigns of a horſe's recovery are known by his hide's keeping open, and his ſkin feeling kindly; his ears and feet will be of a moderate warmth, and his eyes briſk and lively; his noſe grows clean and dry; his appetite mends, he lays down well, and both ſtales and dungs regularly.

Cautions.

Be careful not to overfeed him on his recovery; let his diet be light, feeds ſmall, and increaſed by degrees, as he gets ſtrength: for by overfeeding, horſes have frequent relapſes, or great ſurfeits, which are always difficult of cure.

Practical obſervation.

This is the moſt ſucceſsful method of treating theſe irregular, malignant fevers; where it is evident, by the various efforts nature makes to relieve herſelf, ſhe wants aſſiſtance, and a ſpur to quicken her motions. For by the uſe of theſe warm medicines, a criſis, or termination of the diſeaſe, is quickened and promoted, as appears by the alteration made both in the urine and ſkin; the former of which, by its thickneſs, ſhews ſigns of concoction, as it is called, or of a ſeparation of the feveriſh matter from the bood; and the latter, by its ſmoothneſs and gloſſineſs, proves that a regular and free perſpiration

is

is obtained: theſe two ſecretions are of ſuch importance to the welfare of every animal, that the neceſſity of rectifying them, when diſordered, is obvious from the conſequences.

The cure of an intermitting fever.

If this fever ſhould be brought to intermit, or prove of the intermitting kind, immediately after the fit is over, give an ounce of Jeſuit's bark, and repeat it every ſix hours, till the horſe has taken four or ſix ounces: ſhould eruptions or ſwellings appear, they ought to be encouraged, for they are good ſymptoms at the decline of a fever, denote a termination of the diſtemper, and that no farther medicines are wanted.

Reaſons why ſo many horſes die in fevers.

The true reaſons perhaps why ſo many horſes miſcarry in fevers, are, that their maſters, or doctors, will not wait with patience, and let nature have fair play: that they generally neglect bleeding ſufficiently at firſt; and are conſtantly forcing down ſugar ſops, or other food in a horn, as if a horſe muſt be ſtarved in a few days, if he did not eat: then they ply him twice or thrice a day with hot medicines and ſpirituous drinks, which (excepting a very few caſes) muſt be extremely pernicious to a horſe, whoſe diet is naturally ſimple, and whoſe ſtomach and blood, unaccuſtomed

to

to ſuch heating medicines, muſt be greatly injured, and without doubt are often inflamed by ſuch treatment.

Of epidemic fevers.

From the experience we lately had of the epidemic cold and fever among our horſes, and from the obſervations of others in the years 1732 and 1734, it evidently appeared that the ſimpleſt method of treatment ſucceeded beſt. Thus it is proper to bleed largely at firſt, to the quantity of three quarts, if the horſe is full and ſtrong: and if it appears that his lungs are not relieved by it, but continue ſtuffed and loaded, the bleeding ſhould be repeated; and a rowel may be put in his cheſt or belly.

A general method of cure.

Dilute the blood with plenty of water, or white drink; let his diet be warm bran maſhes, and his hay ſprinkled. Should the fever riſe, which will be known by the ſymptoms above deſcribed, give him an ounce of nitre thrice a day in his water, or made up in a ball with honey. Let his body be kept cool and open, with the opening drink, given twice or thrice a week; or an ounce of ſalt of tartar may be given every day, diſſolved in his water for that purpoſe, omitting then the nitre. After a week's treatment in this manner, the cordial ball may be given once

once or twice a day, with an infusion of liquorice root sweetened with honey; to which may be added, when the phlegm is tough, or cough dry and husky, a quarter of a pint of linseed, or sallad oil, and the same quantity of oxymel squills.

As the kernels about the throat are greatly swelled in these cases, I need not mention the necessity of keeping the head and throat warmer than ordinary, to promote a freer perspiration, and forward the running at the nose, which in a horse answers the end of spitting, or expectoration in us: but the nose should never be syringed, as is sometimes done, to promote this discharge, which it often checks, and occasions bad swellings in the neighbouring parts and glands: for let it be remembered these are critical runnings of nature's own appointments, which by art may soon be frustrated. The following cooling purge is very proper to give at the decline of the distemper, and may be repeated three or four times. Necessary cautions.

TAKE two ounces of sena; aniseed and fennel bruised, each half an ounce; salt of tartar three drams; let them infuse two hours in a pint of boiling water; strain off, and dissolve A cooling purge.

diſſolve in it three ounces of Glauber ſalt, and two of cream of tartar; give for a doſe in the morning.

This purge generally works before night very gently; and in fevers, and all inflammatory diſorders, is infinitely preferable to any other phyſick.

The pulſe of horſes ſhould be attended to.

Before we cloſe this chapter on fevers, it may be no improper hint to the curious, to take notice that a horſe's pulſe ſhould more particularly be attended to than is cuſtomary, as a proper eſtimate may thereby be made both of the degree and violence of the fever preſent, by obſerving the rapidity of the blood's motion, and the force that the heart and arteries labour with, to propel it round. The higheſt calculation that has been made of the quickneſs of the pulſe in a healthy horſe, is, that it beats about forty ſtrokes in a minute; ſo that in proportion to the increaſe above this number, the fever is riſing, and if farther increaſed to above fifty, the fever is very high.

How to calculate the pulſe.

How often the pulſe beats in a minute may eaſily be diſcovered by meaſuring the time with a ſtop watch, or minute ſand-glaſs, while your hand is laid on the horſe's near ſide, or your fingers on any

any artery; thoſe which run up on each ſide the neck, are generally to be ſeen beating as well as felt a little above the cheſt; and one within ſide each leg may be traced with the finger.

The knowledge of the pulſe of great importance.

A due attention to the pulſe is ſo important an article, in order to form a proper judgment in fevers, that it would appear amazing it has ſo much been neglected, if one did not recollect, that the generality of *farriers* are ſo egregiouſly ignorant, that they have no manner of conception of the blood's circulation, nor in general have they ability enough to diſtinguiſh the difference between an artery and a vein—With ſuch pretty guardians do we intruſt the healths and lives of the moſt valuable of animals!

For which reaſon I cannot too much enforce the neceſſity of this ſtudy and practice, as it is evident to every one with what ſcrupulous attention the human pulſe is examined in every feveriſh ſtage, and how often the phyſician's judgment is chiefly directed by it. What diſcoveries therefore might not be made by accurate obſervations on the pulſe of horſes, both in regard to the quickneſs of the blood's motion, and to the hardneſs of the artery, from its difficult vibrations!

How uſeful. It would be a ſure guide to diſtinguiſh an inflammatory fever with denſe ſizy blood, from an irregular depreſſed one; it would direct us more certainly when, and how often we ſhould repeat bleeding in fevers, and other diſorders, and when we ſhould draw off blood previous to purging; or refrain from the latter, till by lowering the horſe's diet, his conſtitution and blood is reduced to a proper temper; for in ſuch as are replete and ſanguine, without this caution, an inflammation of the bowels is ſoon brought on by the irritations ſuch ſtimulating medicines produce on veſſels too turgid, and many a horſe's life has been ſacrificed to this neglect, but more particularly, fine, high fed ones. It would alſo be of uſe to diſcover whether a horſe has recovered himſelf in due time, after having been drove hard, either on the chace, or race, *&c.* This digreſſion, it is hoped, will be more readily pardoned, as it is not a mere matter of ſpeculation, but a practical remark.

CHAP.

CHAP. V.

Of a PLEURISY, *and* Inflammation *of the* Lungs, *&c*

THESE diſorders have ſcarce been mentioned by any writer in farriery before Mr. Gibſon; who, by frequently examining the carcaſſes of dead horſes, has found them ſubject to the different kinds of inflammations here deſcribed. Inflammatory diſorders are frequent in horſes.

He has often diſcovered matter on the pleura (or membrane which lines the cheſt internally) making its way into the cheſt; he has found in ſome horſes the whole ſubſtance of the lungs black, and full of a gangreened water; and in others abſceſſes of various ſizes; and, in ſhort, inflammations in every bowel. He has frequently ſeen the blood-veſſels ſo overloaded, that the blood has burſt out of the ſmaller veſſels, and run over their carcaſſes in many places, while the collar-maker was fleaing of their hides, and on cutting open the larger veſſels, the blood has guſhed out as from a fountain, filling all the cavity of the body; an evi- Practical obſervation.

dent proof that plentiful evacuation had been neglected. In order to diſtinguiſh theſe diſorders from others, we ſhall deſcribe the ſymptoms in Mr. Gibſon's own words.

The ſigns of a pleuriſy, and inflammation of the lungs.

" A pleuriſy then, which is an inflammation of the pleura, and a peripneumony, which is an inflammation of the lungs, have ſymptoms very much alike; with this difference only, that in a pleuriſy a horſe ſhews great uneaſineſs, and ſhifts about from place to place; the fever, which at firſt is moderate, riſes ſuddenly very high; in the beginning he often ſtrives to lie down, but ſtarts up again immediately, and frequently turns his head towards the affected ſide, which has cauſed many to miſtake a pleuritic diſorder for the gripes, this ſign being common to both, though with this difference:

How to diſtinguiſh them from the gripes.

" In the gripes a horſe frequently lies down, and rolls; and when they are violent, he will alſo have convulſive twitches, his eyes being turned up, and his limbs ſtretched out, as if he was dying: his ears and feet ſometimes occaſionally hot, and ſometimes as cold as ice; he falls into profuſe ſweats, and then into cold damps, ſtrives often to ſtale and

dung,

dung, but with great pain and difficulty; which ſymptoms generally continue, till he has ſome relief. But in a pleuriſy, a horſe's ears and feet are always burning-hot, his mouth parched and dry, his pulſe hard and quick: even ſometimes when he is nigh dying, his fever is continued and increaſing; and though in the beginning he makes many motions to lie down, yet afterwards he runs back as far as his collar will permit, and makes not the leaſt offer to change his poſture, but ſtands panting with ſhort ſtops, and a diſpoſition to cough, till he has relief, or drops down."

The ſymptoms of inflamed lungs.

In an inflammation of the lungs, ſeveral of the ſymptoms are the ſame, only in the beginning he is leſs active, and never offers to lie down during the whole time of his ſickneſs; his fever is ſtrong, breathing difficult, and attended with a ſhort cough; and whereas in a pleuriſy, a horſe's mouth is generally parched and dry, in an inflammation of the lungs, when a horſe's mouth is open, a ropy ſlime will run out in abundance; he gleets alſo at the noſe a reddiſh or yellowiſh water, which ſticks like glue to the inſide of his noſtrils.

In a pleuriſy, a horſe heaves and works violently at his flanks, with great reſtleſneſs, and for the moſt part his belly is tucked up; but in an inflammation of the lungs, he always ſhews fulneſs, and the working of his flanks is regular, except after drinking and ſhifting his poſture; and his ears and feet are for the moſt part cold, and often in damp ſweats.

The cure of a pleuriſy, and inflamed lungs.

The cure of both theſe diſorders is the ſame. In the beginning a ſtrong horſe may loſe three quarts of blood, the next day two quarts more; and if ſymptoms do not abate, the bleedings muſt be repeated, a quart at a time; for it is ſpeedy, large, and quick repeated bleedings that are in theſe caſes chiefly to be depended on. But if a horſe has had any previous weakneſs, or is old, you muſt bleed him in leſs quantities, and oftener. Mr. Gibſon recommends rowels on each ſide the breaſt, and one on the belly; and a bliſtering ointment to be rubbed all over his briſket upon the foremoſt ribs.

The medicines neceſſary.

The diet and medicines ſhould be both cooling, attenuating, relaxing, and diluting; and the horſe ſhould have warm maſhes,

maſhes, and plenty of water, or gruel. The following balls may be given thrice a day.

TAKE of ſperma-ceti and nitre, of each one ounce; oil of aniſeed thirty drops; with honey enough to make a ball. Pectoral balls.

A pint of barley-water, in which figs and liquorice-root have been boiled, ſhould be given after each ball; to which the juice of lemons may be added; and if the lungs are greatly oppreſſed with a dry ſhort cough, two or three horns, full of the decoction, may be given three or four times a day, with four ſpoonfuls of honey and linſeed oil. A ſtrong decoction of the rattle-ſnake-root is alſo much recommended in pleuritic diſorders, and may be given to the quantity of two quarts a day, ſweetened with honey. It remarkably attenuates the blood, and diſperſes the inflammation, and in ſome parts is deemed a ſpecifick for this complaint. The regimen proper.

An emollient glyſter ſhould be injected once a day, to which may be added two ounces of nitre, or cream of tartar. Glyſters neceſſary.

In two or three days he will probably run at the nose, and begin to feed; but should he not, and continue hot and short-breathed, you must bleed him again, and give the following glyster.

A purging glyster.

TAKE sena and marsh-mallows, of each two ounces; fennel and bay-berries, each one ounce; boil in five pints of water to two quarts, pour off the clear, and add four ounces of purging salts, two or three of syrup of buckthorn, and half a pint of linseed, or any common oil.

If by these means he grows cooler, and his pain moderates, repeat the glyster the next day, unless it worked too much; then intermit a day; and when he comes to eat scalded bran and picked hay, leave off the balls, and continue only the decoction, with now and then a glyster.

Observation.

But let it be observed, that a horse seldom gets the better of these disorders, unless he has relief in a few days; for if the inflammation is not checked in that time, it usually terminates in a gangrene,

grene, or collection of matter, which for want of expectoration soon suffocates him.

But as pleuritic disorders are apt to leave a taint on the lungs, great care should be taken of the horse's exercise and feeding, which should be light and open for two or three weeks. Thus a quartern of bran scalded, with a spoonful of honey and flower of brimstone, may be given every day, with two or three small feeds of oats sprinkled with chamber lye. Instead of the bran, for a change, give about a quart of barley scalded in a double infusion of hot water, that it may be softened, and the water given to drink. His exercise should be gradual, in an open air and fair weather; and when his strength is recovered, a gentle purge or two should be given; that of rhubarb, when it can be afforded, is best, or the purging drink already recommended for this purpose.

The horse's diet and exercise should be well attended to.

There is also an external pleurisy, or inflammation of the muscles, between the ribs, which when not properly treated, proves the foundation of that disorder, called the *chest-founder:* for if the inflammation is not dispersed in time, and the viscid blood and juices so attenuated by

An external pleurisy. Chest-founder, what.

by internal medicines, that a free circulation is obtained; ſuch a ſtiffneſs and inactivity will remain on theſe parts as will not eaſily be removed, and which is generally known by the name of *cheſt-founder.*

The ſigns. The ſigns of this inflammation, or external pleuriſy, are a ſtiffneſs of the body, ſhoulders, and fore-legs; attended ſometimes with a ſhort dry cough, and a ſkrinking when handled in thoſe parts.

The cure. Bleeding, ſoft pectorals, attenuants, and gentle purges, are the internal remedies; and externally the parts affected may be bathed with equal parts of ſpirit of ſal armoniac, and ointment of marſh-mallows, or oil of camomile.

Obſervation. Theſe outward inflammations frequently fall into the inſide of the fore-leg, and ſometimes near the ſhoulder; forming abſceſſes, which terminate the diſorder.

The diaphragm and other parts of the cheſt ſubject to inflammation. The membrane which ſeparates the lungs, and more particularly the diaphragm, or midriff, is often alſo inflamed; which is ſcarce to be diſtinguiſhed from the pleuriſy, only in this, that when the midriff is greatly inflamed, the horſe will

will ſometimes be jaw-ſet, and his mouth ſo much cloſed, that nothing can be got in: but the method of cure is the ſame.

CHAP. IV.

Of a COUGH, *and* ASTHMA.

THE conſequence often of the preceding diſorders injudiciouſly treated, are ſettled habitual coughs; which frequently degenerate into aſthmas, and broken-wind. The cauſes of a ſettled cough.

Various are the cauſes aſſigned for this laſt diſorder, which, as merely conjectural, we ſhall wave; but the appearances on the diſſection of broken-winded horſes, will be taken notice of in the proper place.

Nothing has more perplexed practitioners than the cure of ſettled coughs; the cauſe of which, perhaps, has been their want of attention to the different ſymptoms which diſtinguiſh one cough from another: for without ſtrict obſervance Coughs to be diſtinguiſhed.

ſervance thereof, it is impoſſible to find out the true method of cure.

Obſervation. Thus if a horſe's cough is of long ſtanding, attended with loſs of appetite, waſting of fleſh, and weakneſs, it denotes a conſumption; and that the lungs are full of knotty, hard ſubſtances, called tubercles, which have often been diſcovered on diſſection. *Vide* Conſumption.

The ſigns of a moiſt cough. The following ſigns denote when the cough proceeds from phlegm, and ſlimy matter, that ſtop up the veſſels of the lungs.

The horſe's flanks have a ſudden quick motion; he breathes thick, but not with his noſtrils open, like a horſe in a fever, or that is broken-winded: his cough is ſometimes dry and huſky, ſometimes moiſt, before which he wheezes, rattles in the throat, and ſometimes throws out of his noſe and mouth great gobs of white phlegm, eſpecially after drinking, or when he begins or ends his exerciſe, which diſcharge commonly gives great relief. Some ſuch horſes wheeze and rattle to ſuch a degree, and are ſo thick-winded, that they can ſcarce move on, till they have been out ſome time in the air; though

though then they will perform beyond expectation.

Theſe are properly aſthmatic caſes, and ought to be diſtinguiſhed in their ſymptoms from that purſiveneſs and thick windedneſs we ſee in ſome horſes, occaſioned by too full, or foul feeding, want of due exerciſe, or their being taken up from winter's graſs. But theſe two laſt caſes are eaſily cured by proper diet and exerciſe; the one by lowering his keeping, and the other by increaſing it.

The above aſthmatic caſe proves often very obſtinate; but, if it happens to a young horſe, and the cough is not of long ſtanding, it is greatly relieved, if not totally cured by the following method.

The cure.

If the horſe is full of fleſh, bleed him plentifully; if low in fleſh, more ſparingly; which may occaſionally be repeated, on very great oppreſſions, and difficulty of breathing, in proportionate quantities.

Mercurials recommended.

As mercurial medicines are found remarkably uſeful in theſe caſes, give a mercurial ball (with two drams of calomel)

mel) over night, and a common purge the next morning: or the following, which is much recommended by Mr. Gibſon.

An alterative purge

TAKE gum galbanum, Ammoniacum, and aſſa fœtida, of each two drams; fine aloes one ounce, ſaffron one dram, oil of aniſeeds two drams, oil of amber one dram: with honey enough to form into a ball.

They may be repeated at proper intervals, with the uſual cautions. In the intermediate days, and for ſome time after, one of the following balls may be given every morning.

Balls for an obſtinate cough.

TAKE cinabar of antimony, finely levigated ſix ounces: gum Ammoniacum, galbanum, and aſſa fœtida, of each two ounces: garlic four ounces, ſaffron half an ounce: make into a paſte for balls, with a proper quantity of honey.

Remarks on them.

Theſe balls are extremely well calculated for this purpoſe; but if they are thought too expenſive, the cordial ball may be given, with an eighth part of powdered

powdered ſquills and Barbadoes tar; or equal quantities of the above, and cordial ball may be beat up together; and where they can be afforded, balſam of Peru, balſam of ſulphur, and flowers of Benjamin, would undoubtedly, added to the cordial ball, make it a more efficacious medicine in caſes of this ſort, as thus:

An efficacious ball for a cough.

TAKE of the pectoral or cordial ball one pound, balſam of Peru half an ounce, balſam of ſulphur aniſated one ounce, flowers of Benjamin half an ounce, honey as much as is ſufficient to form them into a paſte; give the ſize of a pigeon's egg every morning.

Exerciſe and diet particularly recommended.

Exerciſe in a free open air is very ſerviceable, and the diet ſhould be moderate. Horſes ſubject to any inward oppreſſions of the lungs, ſhould never be ſuffered to have a belly full; that is, they ſhould never be permitted ſo to diſtend their ſtomach with meat or water, as to preſs againſt the midriff; which of courſe would hinder reſpiration. Their hay ſhould even be abridged, given in ſmall quantities, and ſprinkled with water; and their uſual allowance both of corn and water, ſhould be divided into ſeveral portions:

portions: by such a regulation in diet, horses may be so recovered as to do great service; and in all disorders of the lungs it is what should principally be attended to.

The following are the symptoms of a dry cough, or asthma.

The signs of a dry cough or asthma.

The horse afflicted with this cough, eats heartily, hunts, and goes through his business with alacrity, appears well coated, and has all the signs of perfect health; yet he shall cough at particular times almost incessantly, without throwing up any thing, except that the violence of the cough will cause a little clear water to distil from his nose. Though this cough is not periodical, yet some of these horses cough most in a morning, after drinking.

A nervous cough, what.

This may properly be stiled a nervous asthma in a horse; as probably it chiefly affects the nerves in the membranous parts of the lungs and midriff; and is a case very doubtful, at least, if not incurable: but when the horse is young, the following method may be successful.

Take

Take away firſt a moderate quantity of blood; then give him two drams of calomel, mixed up with an ounce of diapente, for two nights; and the next morning a purging ball. Keep him well cloathed and littered, and feed him with ſcalded bran and warm water. The cure.

Once in eight or ten days this purge may be repeated, with one mercurial ball only, given over-night.

The following balls may then be taken, one every day, about the ſize of a pullet's egg, the horſe faſting two hours afterwards; and ſhould be continued two months, or longer, to be of real ſervice.

TAKE native cinnabar, or cinnabar of antimony, half a pound; gum guaiacum four ounces; myrrh, and gum Ammoniac, of each two ounces; Venice ſoap half a pound: the cinnabar muſt be finely levigated, as before obſerved, and the whole mixed up with honey, or oxymel ſquills. Balls for an obſtinate dry cough.

The following alſo will be found an uſeful remedy in obſtinate dry coughs.

TAKE gum Ammoniacum, ſquills, and Venice ſoap, of each four ounces; balſam of ſulphur with aniſeeds one ounce; beat up into a maſs, and give as the former.

Obſervation. Theſe mercurial and ponderous medicines are well adapted to open obſtructions in the lungs, and prevent thoſe little knots, or tubercles, which ſo frequently ulcerate, and lay the foundation of an incurable malady, or conſumption: but the common pectorals alone will avail nothing in old ſtubborn coughs, their efficacy being loſt in the long tour they have to make, before they come to the lungs; and indeed, were it otherwiſe, without they had ſuch powerful openers joined with them, they would be of little conſequence; for where there are any expectations from medicines, ſuch are chiefly to be relied on, which have a power of diſſolving and attenuating the viſcid humours, opening the ſmall obſtructed veſſels, and promoting all the natural ſecretions.

Before

Before we close this chapter, it may be necessary to observe here that some young horses are subject to coughs on cutting their teeth; their eyes also are affected from the same cause. In these cases always bleed, and if the cough is obstinate, repeat it, and give warm mashes; which, in general, are alone sufficient to remove this complaint. But when the cough is an attendant on worms, as it often is in young horses, you must give such medicines as have a power to destroy those animals; particularly mercurial physick at proper intervals, and intermediately half an ounce of Æthiop's mineral, mixed up with the cordial, or pectoral balls, may be given every day. *Vide* Chapter on WORMS.

Coughs in young horses, how treated.

When from worms.

CHAP. VII.

Of a BROKEN-WIND.

The cauſe of broken wind.

THIS diſorder hitherto ſeems to have been little underſtood, but Mr. Gibſon is inclined to think, that the ſource of it is frequently owing to injudicious, or haſty feeding young horſes for ſale; by which means the growth of the lungs, and all the contents within the cheſt, are ſo increaſed, and in a few years ſo preternaturally enlarged, that the cavity of the cheſt is not capacious enough for them to expand themſelves in, and perform their functions.

Obſervation.

A narrow contracted cheſt with large lungs may ſometimes naturally be the cauſe of this diſorder: and it has been obſerved, that horſes riſing eight years old are as liable to this diſtemper, as at a certain period of life men fall into aſthmas, conſumptions, and other chronic diſeaſes.

The reaſon why this diſorder becomes more apparent at this age, may be, that a horſe comes to his full ſtrength and maturity at this time: at ſix he commonly finiſhes his growth in heighth; after that time he lets down his belly and ſpreads, and all his parts are grown to their full extent; ſo that the preſſure on the lungs and midriff is now more increaſed.

Why horſes riſing ſeven or eight, grow broken-winded.

But how little weight ſoever theſe reaſons may have, repeated diſſections have given ocular proofs of a preternatural largeneſs, not only of the lungs of broken-winded horſes, but of their heart and its bag; and of the membrane which divides the cheſt; as well as of a remarkable thinneſs in the diaphragm, or midriff.

Obſervation.

This diſproportion has been obſerved to be ſo great, that the heart and lungs, have been almoſt of twice their natural ſize, perfectly ſound, and without any ulceration whatever; or any defect in the wind-pipe or its glands.

The parts affected in broken-winded horſes.

The preternatural size of the lungs the chief cause.

Hence it appears that this enormous size of the lungs, and the space they occupy, by hindering the free action of the midriff, is the chief cause of this disorder; and as the substance of the lungs was found more fleshy than usual, they of course must lose a great deal of their spring and tone.

The difficulty in breathing accounted for.

This fleshiness and size of the lungs may in a great measure be the cause, why the inspirations in broken winded horses are disproportionately slow; for we may observe that they draw in their breath slowly, their flanks filling up, and rising with difficulty: but that their flanks fall suddenly, and their breath bursts forth with violence, both from the mouth and nostrils; insomuch that a man in the dark, by holding his hands on a horse's mouth and nose, may easily discover if he is broken-winded.

Broken-wind incurable.

Whoever considers a broken-wind in this light, must own that it may be reckoned among the incurable distempers of horses; and that all the boasted pretensions to cure, are vain and frivolous, since the utmost skill can amount to no more than

than now and then palliating the ſymptoms, and mitigating their violence.

We ſhall therefore only lay down ſuch methods as may probably prevent this diſorder when purſued in time. But if they ſhould not ſucceed, we ſhall offer ſome remedies and rules to mitigate its force, and to make a horſe as uſeful as poſſible under this malady.

The ſymtom which foretels a broken-wind.

It is uſual before a broken-wind appears, for a horſe to have a dry obſtinate cough, without any viſible ſickneſs, or loſs of appetite; but, on the contrary, a diſpoſition to foul feeding, eating the litter, and drinking much water.

In order then to prevent, as much as poſſible, this diſorder, bleed him, and give him the mercurial phyſick above preſcribed, which ſhould be repeated two or three times.

The following balls are then to be taken for ſome time, which have been found extremely efficacious in removing obſtinate coughs.

Balls for a broken-wind.

TAKE aurum Moſaicum, finely powdered, eight ounces; myrrh and

elicampane, powdered each four ounces; aniseeds and bay-berries, each an ounce; saffron, half an ounce; make into balls with oxymel squills,

Remarks. The aurum Mosaicum is made of equal parts of quicksilver, tin, sal armoniac, and sulphur. We give this medicine, as strongly recommended by Mr. Gibson; but how far the aurum Mosaicum may contribute to its efficacy, may perhaps justly be disputed: as a substitute in its room therefore, for this purpose, we recommend the same quantity of powered squills, or gum Ammoniacum; or equal parts of each. For this end also the following is offered.

Another for that purpose. TAKE gum Ammoniacum, galbanum, and assa fœtida, of each two ounces; squills four ounces, cinabar of antimony six ounces, saffron half an ounce; make into a paste with honey. Give the quantity of a pullet's egg every morning.

The diet for broken winded horses. Broken winded horses should eat sparingly of hay, which as well as their corn may be wetted with chamber-lye, or fair

fair water; as this will make them leſs craving after water.

Garlick recommended.

The volatile ſalts in the urine may make it preferable to water, and may be the reaſon why garlic is found ſo efficacious in theſe caſes: two or three cloves given at a time in a feed, or three ounces of garlick bruiſed, and boiled in a quart of milk and water, and given every other morning for a fortnight, having been found very ſerviceable; for by warming and ſtimulating the ſolids, and diſſolving the tenacious juices, which choak up the veſſels of the lungs, theſe complaints are greatly relieved.

Broken-winded horſes ſhould be conſtantly abroad.

Careful feeding and moderate exerciſe has greatly relieved broken-winded horſes; and though for the firſt ſummer they have not been able to endure much labour, yet many have been found leſs oppreſſed the ſecond, and ſome ſcarce perceptibly affected the third; and even able to bear great fatigue: and could a horſe be kept conſtantly in the field, and taken up only when uſed, he might by this management do good ſervice for many years.

But

Neceſſary caution.

But whoever expects to cure his horſe, by ſending him out to graſs, will find himſelf diſappointed; eſpecially if he remains abroad after the ſpring graſs, for on his return to the ſtable and dry meat, he will be more oppreſſed and ſhort breathed than before, for want of the open air and moiſt food he had been accuſtomed to.

A remarkable obſervation.

Horſes ſent to graſs, in order to be cured of an obſtinate cough, have often returned completely broken winded, where the paſture has been rich and ſucculent, ſo that they have had their bellies conſtantly full. As the ill conſequence therefore is obvious, where you have not the conveniency of turning out your horſe for a conſtancy, you may ſoil him for a month or two with young green barley, tares or any other young herbage.

Thick winded horſes, how treated.

To purſive thick-winded horſes, Barbadoes and common tar have often been given with ſucceſs, to the quantity of two ſpoonfuls mixed with the yolk of an egg, diſſolved in warm ale, and given faſting two or three times a week, eſpecially thoſe days you hunt or travel.

But

But in order to make all theſe ſorts of horſes of any real ſervice to you, the grand point is to have a particular regard to their diet, obſerving a juſt œconomy both in that and their exerciſe; giving but a moderate quantity of hay, corn, or water, at a time, and moiſtening the former, to prevent their requiring too much of the latter, and never exerciſing them but with moderation, as has before been obſerved. The following alterative ball may be given once a fortnight or three weeks, and as it operates very gently, and requires no confinement but on thoſe days it is given (when warm meat and water are neceſſary) it may be continued for two or three months. Their regimen.

TAKE Succotrine aloes ſix drams, myrrh, galbanum, and Ammoniacum, of each two drams; bay-berries half an ounce: make into a ball with a ſpoonful of oil of amber, and a ſufficient quantity of ſyrup of buckthorn. An alterative purging ball.

CHAP. VIII.

Of a CONSUMPTION.

The ſigns of a conſumption.

WHEN a conſumption proceeds from a defect in a horſe's lungs, or any principal bowel, the eyes look dull; the ears and feet are moſtly hot; he coughs ſharply by fits; ſneezes much, and frequently groans with it; his flanks have a quick motion; he gleets often at the noſe, and ſometimes throws out a yellowiſh curdled matter; and he has little appetite to hay, but will eat corn, after which he generally grows hot.

The cure.

As to the cure, one of the principal things is bleeding in ſmall quantities (a pint, or pint and half, from ſome horſes is ſufficient) which ſhould be repeated as often as the breath is more than ordinarily oppreſſed. Pectorals may be given to palliate preſent emergent ſymptoms; but as diſſections have diſcovered both the glands of the lungs, and meſentery to be ſwelled, and often indurated, the whole ſtreſs lies on mercurial purges, and the

the following ponderous alteratives, given intermediately.

Alterative powders.

TAKE native cinnabar, or cinnabar of antimony, one pound, powder very fine, and add the ſame quantity of gum guaiacum and nitre; give the horſe an ounce of this powder twice a day, wetting his feeds.

The ſalt marſhes commended.

The ſpring graſs is often extremely ſerviceable, but the ſalt-marſhes are to be preferred, and given to be more depended on than medicines; for great alterations are thereby made in the blood and juices, and no ſmall benefit ariſes from open air, and proper exerciſe.

Obſervation.

But it may be worth obſerving, that a horſe frequently relapſes, after appearances of amendment; when a yellowiſh gleet, or curdled matter runs from his noſe, and he grows emaciated, is much addicted to ſweat, heaves much with a reduplicated motion, and has a ſhort rattling cough; under theſe circumſtances there can be little hopes of his recovery, or any future ſervices from him; conſequently, to ſave farther expences, the beſt way would be to diſpatch him as an incurable.

An

Aremark. As many of the above medicines in this, and the preceding chapter for coughs, may be thought too expenſive for horſes of no great value, tar-water may ſupply their place; and perhaps will be found on trial no unworthy medicine, as Barbadoes and common tar has been experienced very effectual in ſome ſort of coughs, and of great ſervice to thick-winded horſes.

CHAP. IX.

Of an Apoplexy, *or* Staggers, Convulſive Diſorders, Lethargy, Epilepſy, *and* Palſy.

Diſorders of the head, how to be diſtinguiſhed.

FARRIERS generally include all diſtempers of the head under two denominations, viz. *Staggers* and *Convulſions*; wherein they always ſuppoſe the head primarily affected. But in treating on theſe diſorders, we ſhall diſtinguiſh between thoſe that are peculiar to the head, as having their ſource originally thence; and

and thoſe that are only concomitants of ſome other diſeaſe, where the head is affected ſecondarily by conſent of nerves, the ſource of this diſorder being in the ſtomach, bowels, &c. By this method we ſhall avoid many blunders, which would otherwiſe ariſe in practice, for want of knowing the true ſeat of the diſorder.

In an apoplexy a horſe drops down ſuddenly without any other ſenſe or motion than a working at his flanks.

The ſymptoms of apoplexy, or ſtaggers.

The previous ſymptoms are drowſineſs, watery eyes, ſomewhat full and inflamed; a diſpoſition to reel, feebleneſs, a bad appetite; the head almoſt conſtantly hanging, or reſting on the manger; ſometimes with little or no fever, and ſcarce any alteration in the dung or urine: the horſe is ſometimes diſpoſed to rear up, and apt to fall back when handled about the head, which is often the caſe with young horſes, to which it does not prove ſuddenly mortal, but with proper help they may ſometimes recover. If the apoplexy proceeds from wounds, or blows on the head, or matter on the brain, beſides the above ſymptoms, the horſe will be frantick by fits, eſpecially after

after his feeds, ſo as to ſtart and fly at every thing. Theſe caſes ſeldom admit of a perfect recovery; and when horſes fall down ſuddenly and work violently at their flanks, without any ability to riſe after a plentiful bleeding, they ſeldom recover.

The cure. All that can be done is to empty the veſſels as ſpeedily as poſſible, by ſtriking the veins in ſeveral parts at once, bleeding to four or five quarts, and to raiſe up the horſes's head and ſhoulders, ſupporting them with plenty of ſtraw. If he ſurvives the fit, cut ſeveral rowels; giue him, night and morning, glyſters prepared with a ſtrong decoction of ſena and ſalt, or the purging glyſter mentioned in the directions; blow once a day up his noſtrils a dram of powder of aſarabacca, which will promote a great diſcharge, afterwards two or three aloetic purges ſhoud be given; and to ſecure him from a relapſe, by attenuating and thinning his blood, give him an ounce of equal parts of antimony and crocus metallorum for a month; or which is preferable, the ſame quantity of cinnabar of antimony and gum guaicum.

If

If the fit proceeds only from fulneſs of blood, high feeding, and want of ſufficient exerciſe, or a ſizy blood (which is often the caſe with young horſes, who, though they reel, ſtagger, and ſometimes ſuddenly fall down, yet are eaſily cured by the above method) an opening diet with ſcalded bran and barley will be neceſſary for ſome time; and the bleeding may be repeated in ſmall quantities. When the ſtaggers are not dangerous.

As to the other diſorders of the head, ſuch as lethargy, or ſleeping evil, epilepſy, or falling ſickneſs, vertigo, frenzy, and madneſs, convulſions, and paralytical diſorders, as they are moſt of them to be treated as the apoplexy and epilepſy, by bleeding and evacuations, with the alteratives there directed, we ſhall wave treating on them ſeparately, but mention ſome particular rules to diſtinguiſh them, according to the plan we laid down, and then offer ſome general remedies for the ſeveral purpoſes. Lethargy, Vertigo.

Thus in order to diſtinguiſh epileptic diſorders and convulſions (which are often occaſioned by worms, bots, and ulcerations of the ſtomach, bowels and midriff) from thoſe which ariſe from origi- Epilepſy and convulſions.

nal cauſes in the head only, we ſhall deſcribe the ſymptoms which diſtinguiſh them from each other; by which means we ſhall be able to avoid any miſtake in the application of the remedy: and as epileptic diſorders have by ignorant farriers been miſtaken for the gripes, we ſhall alſo diſtinguiſh theſe diſorders by the ſymptoms.

How epileptic diſorders are diſtinguiſhed from gripes.

In an epilepſy, or falling ſickneſs, the horſe reels and ſtaggers, his eyes are fixed in his head, he has no ſenſe of what he is doing, he ſtales and dungs inſenſibly, he runs round and falls ſuddenly; ſometimes he is immoveable, with his legs ſtretched out, as if he was dead, except only a quick motion of his heart and lungs, which cauſes a violent working of his flanks; ſometimes he has involuntary motions, and ſhaking of his limbs, ſo ſtrong, that he has not only beat and ſpurned his litter, but the pavement with it; and with theſe alternate ſymptoms a horſe has continued more than three hours, and then he has as ſurprizingly recovered: at the going off of the fit, he generally foams at the mouth, the foam being white and dry, like what comes from a healthful horſe when he champs on the bit.

But

But in all kinds of gripes, whether they proceed from diſorders in the guts, or retention of urine, a horſe is often up and down, rolls and tumbles about, and when he goes to lie down, generally makes ſeveral motions with great ſeeming carefulneſs, which ſhews he has a ſenſe of his pain, and if he lays ſtretched out for any time, it is generally but for a ſhort ſpace. *Vide* Chapter on GRIPES.

The ſymptoms of gripes deſcribed.

Epilepſies and convulſions may ariſe from blows on the head, too violent exerciſe, and hard ſtraining; and from a fulneſs of blood, or impoveriſhed blood, and ſurfeits; which are ſome of the cauſes that denote the original diſorder.

Epilepſies and convulſions ariſe from different cauſes.

But the head may alſo be affected by ſympathy of nerves; for exceſſive pain in any part of the body will excite convulſions, eſpecially if the nerves and tendinous parts are affected, as by wounds, punctures, and bruiſes externally; and by ulcers, gatherings of matter, and by bots and worms, wounding and vellicating the nervous parts internally; long coſtiveneſs has ſometimes alſo occaſioned theſe diſorders. In all ſuch caſes, the

original cauſe muſt principally be attended to.

The general ſymptoms of lethargy.

In lethargic diſorders the horſe generally reſts his head with his mouth in the manger, and his pole often reclined to one ſide; he will ſhew an inclination to eat, but generally falls aſleep with his food in his mouth, and he frequently ſwallows it whole, without chewing: emollient glyſters are extremely neceſſary in this caſe, with the nervous balls recommended for the ſtaggers, and convulſions, p. 87: ſtrong purges are not requiſite, nor muſt you bleed in too large quantities, unleſs the horſe be young and luſty. In old horſes, rowels and large evacuations are improper, but volatiles of all kinds are of uſe, when they can be afforded; the alterative purge, p. 94. may be given and repeated on his amendment.

The good and bad ſymptoms.

This diſtemper is to be cured by theſe means, if the horſe is not old and paſt his vigour. It is a good ſign if he has a tolerable appetite, and drinks freely without ſlabbering, and if he lies down, and riſes up carefully, though it be but ſeldom.

But

But if a lethargic horſe does not lie down, if he is altogether ſtupid and careleſs, and takes no notice of any thing that comes near him; if he dungs and ſtales ſeldom, and even while he ſleeps and dozes, it is a bad ſign; if he runs at the noſe thick white matter, it may relieve him, but if a viſcid gleet that ſticks to his noſtrils like glue, which increaſing, turns to a profuſe running of ropy, reddiſh, and greeniſh matter; it is an infallible ſign of great decay of nature, and that it will prove deadly.

Young horſes, from four to ſix years, are very ſubject to convulſions from bots in the ſpring; and the large coach breed more than the ſaddle: they are ſeized without any previous notice, and if bots and worms are diſcovered in their dung, the cauſe ſeems to be out of doubt, more eſpecially if they have lately come out of a dealer's hands.

Young horſes ſubject to convulſions from bots.

When this convulſion proceeds from a diſtemperature of the midriff, or any of the principal bowels, it is to be diſtinguiſhed from bots and vermin by previous ſymptoms: the horſe falls off his ſtomach, and grows gradually weak,

From the midriff.

feeble, and diſpirited in his work; and turns ſhort breathed with the leaſt exerciſe.

Convulſions from the ſtomach, and other principal bowels described.

The lively deſcription of that univerſal cramp or convulſion, called by ſome the ſtag-evil, which ſeizes all the muſcles of the body at once, and locks up the jaws, ſo that it is impoſſible almoſt to force them open, we ſhall give in Mr. Gibſon's own words; who ſays, "as ſoon as the horſe is ſeized, his head is raiſed with his noſe towards the rack, his ears pricked up, and his tail cocked, looking with eagerneſs as an hungry horſe when hay is put down to him, or like a high-ſpirited horſe when he is put upon his mettle; inſomuch that thoſe who are ſtrangers to ſuch things, when they ſee a horſe ſtand in this manner, will ſcarce believe any thing of conſequence ails him; but they are ſoon convinced, when they ſee other ſymptoms come on apace, and that his neck grows ſtiff, cramped, and almoſt immoveable; and if a horſe in this condition lives a few days, ſeveral knots will ariſe on the tendinous parts thereof, and all the muſcles, both before and behind, will be ſo much pulled and cramped, and ſo ſtretched, that he looks as if he was nailed to the pavement, with

with his legs ſtiff, wide, and ſtraddling; his ſkin is drawn ſo tight on all parts of the body, that it is almoſt impoſſible to move it; and if trial be made to make him walk, he is ready to fall at every ſtep, unleſs he be carefully ſupported: his eyes are ſo fixed with the inaction of the muſcles, as gives him a deadneſs in his looks: he ſnorts and ſneezes often, pants continually with ſhortneſs of breath; and this ſymptom increaſes continually till he drops down dead; which generally happens in a few days, unleſs ſome ſudden and very effectual turn can be given to the diſtemper."

The cure of convulſions.

In all theſe caſes the horſe ſhould firſt be bled plentifully, unleſs he is low in fleſh, old, or lately come off any hard continued duty, then you muſt be more ſparing of his blood; afterwards give the following ball.

The nervous ball.

TAKE aſſa fœtida half an ounce, Ruſſia caſtor powdered two drams, valerian root powdered one ounce: make into a ball with honey and oil of amber.

This ball may be given twice a day at firſt; and then once, waſhed down with a decoction of miſletoe, or valerian; ſweet-

ened with liquorice or honey; an ounce of aſſa fœtida may be tied up in a piece of ſtrong coarſe linen rag, and put behind his grinders to champ on.

The laxative purges and emollient glyſters ſhould be given intermediately to keep the body open; but when the former balls have been taken a week or ten days, the following may be given once a day with the valerian decoction.

Another nervous ball.

TAKE cinnabar of antimony ſix drams, aſſa fœtida half an ounce, ariſtolochia, myrrh, and bay-berrries, of each two drams: make into a ball with treacle and oil of amber.

This is the moſt effectual method of treating theſe diſorders: but when they are ſuſpected to ariſe from bots and worms, which is generally the caſe, mercurial medicines muſt lead the way. Thus.

A mercurial ball.

TAKE mercurius dulcis, and philonium, of each half an ounce; make into a ball with conſerve of roſes, and give the horſe immediately: half the quantity may be repeated in four or five days.

The

The following infuſion ſhould then be given to the quantity of three or four horns, three or four times a day, till the ſymptoms abate; when the above nervous balls may be continued till they are removed.

TAKE penny-royal and rue, of each two large handfuls; camomile flowers one handful; aſſa fœtida and caſtor, of each half an ounce; ſaffron and liquorice root ſliced, of each two drams: infuſe in two quarts of boiling water; pour off from the ingredients as wanted. An infuſion.

If the caſtor is omitted, add an ounce of aſſa fœtida.

The following ointment may be rubbed into the cheeks, temples, neck, ſhoulders, ſpines of the back and loins, and wherever there is the greateſt contractions and ſtiffneſs.

TAKE nerve and marſh-mallow ointment, of each four ounces; oil of amber two ounces; with a ſufficient quantity of camphorate ſpirit of wine: make a liniment. An emollient liniment

To

To horſes of ſmall value give the following.

A nervous infuſion.

TAKE rue, penny-royal, and tobacco, of each a handful; aſſa fœtida an ounce; boil in a quart of forge-water: let the decoction ſtand on the ingredients, and give as the former.

Obſervation.

When the jaws are ſo locked up, that medicines cannot be given by the mouth, it is more eligible then to give them by way of glyſter; for forcing open the jaws by violence, often puts a horſe into ſuch agonies, that the ſymptoms are thereby increaſed. The infuſion above may be given for this purpoſe, or the following.

A nervous glyſter.

TAKE rue, penny-royal, and camomile flowers, of each a handful, valerian root two ounces; boil in five pints of water to two quarts: in the ſtrained liquor diſſolve caſtor and aſſa fœtida, of each half an ounce, or of aſſa fœtida alone one ounce, common oil four ounces. Give this glyſter once a day.

In

In this caſe alſo he muſt be ſupported by nouriſhing glyſters, made of milk-pottage, broths, &c. which muſt be given to the quantity of three or four quarts a day; glyſters of this kind will be retained, and abſorbed into the blood; and there have been inſtances of horſes thus ſupported for three weeks together, who muſt otherwiſe have periſhed. Nutritive glyſters.

Mr. Gibſon mentions ſome extraordinary inſtances of ſucceſs in caſes of this ſort by theſe methods, and repeated frictions, which are extremely ſerviceable in all convulſive diſorders, and often prevent their being jaw-ſet; they ſhould be applied with unwearied diligence every two or three hours, wherever any ſtiffneſs or contractions on the muſcles appear, for a horſe in this condition never lies down till they are in ſome meaſure removed. Frictions very uſeful in all convulſive caſes.

He takes particular notice of a horſe whoſe jaws were ſo locked up for three weeks, that both food and medicine were forced to be given by glyſter; that not having recovered the uſe of his jaws for a fortnight, though he now moved them with leſs ſtiffneſs he was determined, from A remarkable caſe.

from the known relaxing power of opium, to give him half an ounce of it, diſſolved in one of his glyſters, the good effects of which were ſo evident, by a general amendment, that he was encouraged to continue it in the following manner.

TAKE Mathews's pill, and aſſa fœtida, of each an ounce: make into a ball.

This ball he gave for one doſe, and repeated once; and by this and the uſe of the nervous medicines given twice a week, and gentle purging, the horſe was perfectly recovered.

Rowels ſometimes of bad conſequence.

The uſe of rowels in theſe caſes is generally unſucceſsful, the ſkin being ſo tenſe and tight, that they ſeldom digeſt kindly, and ſometimes mortify; ſo that if they are applied, they ſhould be put under the jaws, and in the breaſt.

Remark.

The red-hot iron ſo frequently run through the foretop and mane, near the occipital bone, for this purpoſe, has often been found to have deſtroyed the cervical ligament.

In

In paralytic diſorders, where the uſe of a limb or limbs is taken away, the internals above recommended ſhould be given, in order to warm, invigorate, and attenuate the blood; and the following ſtimulating embrocation ſhould be rubbed into the parts affected. How paralytic diſorders ſhould be treated.

TAKE oil of turpentine four ounces, nerve ointment and oil of bays, of each two ounces; camphor rubbed fine, one ounce; rectified oil of amber three ounces; tincture of cantharides one ounce. A warm ſtimulating liniment.

With this liniment the parts affected ſhould be well bathed for a conſiderable time, to make it penetrate; and when the hind parts chiefly are lame, the back and loins ſhould be well rubbed with the ſame: to the nervous medicines above recommended, may be added ſnake-root, contrayerva, muſtard-ſeed, horſe-radiſh root, ſteeped in ſtrong beer, or wine where it can be afforded. Take the following for an example, which may be given to the quantity of three pints a day alone, or two horns full may be taken after the nervous balls. How uſed.

TAKE

The paralytic infusion.

TAKE ſnake root, contrayerva, and valerian, of each half an ounce; muſtard ſeed and horſe-radiſh root ſcraped, of each two ounces; long pepper two drams: infuſe in three pints of ſtrong beer or wine.

When the horſe is recovering from any of the above diſorders, the following alterative purge may be repeated two or three times, as it operates very gently.

An alterative purge.

TAKE Succotrine aloes one ounce, myrrh half an ounce, aſſa fœtida and gum Ammoniacum, of each two drams, ſaffron one dram; make into a ball with any ſyrup.

How to treat diſorders of the head from coſtiveneſs.

Where a retention of dung is the cauſe of this diſorder, the great gut ſhould firſt be raked thoroughly with a ſmall hand, after which plenty of emollient oily glyſters ſhould be thrown up, and the opening drink given, till the bowels are thoroughly emptied of their impriſoned dung. Their diet ſhould for ſome days be opening, and conſiſt chiefly of ſcalded bran, with flower of brimſtone, ſcalded barley, *&c.*

This

This general method we hope will give sufficient light into the nature of these disorders, and their treatment, without minutely entering into their causes; which in some cases, perhaps, are inscrutable; and where the most plausible writers have appeared rather as learned triflers than satisfactory reasoners. Observation.

CHAP. X.

Of the STRANGLES *and* VIVES.

THE strangles is a distemper to which colts and young horses are very subject; and begins with a swelling between the jaw-bones, which sometimes extends to the muscles of the tongue; and is attended with so great heat, pain, and inflammation, that sometimes, till matter is formed, the horse swallows with the utmost difficulty. The strangles described.

The symptoms are extraordinary heat and feverishness, with a painful cough, and a great inclination to drink without being The symptoms.

being able; ſome horſes loſing their appetite intirely, others eating but little, by reaſon of the pain which chewing and ſwallowing occaſions: when the ſwilling begins on the inſide of the jaw-bones, it is much longer in coming to matter than when more to the middle; when it ariſes among the glands, and divides into ſeveral tumours, the cure is generally tedious, as it breaks in different places; and when it forms upwards on the wind-pipe and gullet, there is ſometimes danger of ſuffocation, unleſs the ſwelling ſoon breaks. But the moſt dangerous kind is, when, beſides the above ſymptoms, the horſe runs at the noſe; this by ſome is called the baſtard ſtrangles.

The cure. As this diſorder ſeems to be critical, the moſt approved method is to aſſiſt nature in bringing the ſwellings to maturity, by keeping them conſtantly moiſt with ointment of marſh-mallows, and covering the head and neck with a warm hood. But as all ſwellings in glandular parts ſuppurate ſlowly, the following poultice may be applied hot twice a day: it is alſo a very proper one to ripen, or bring any other ſwelling to matter.

TAKE

A ſuppurating poultice.

TAKE leaves of marſh-mallows ten handfuls, white lily root half a pound, linſeed and fennugreek ſeed bruiſed, of each four ounces; boild them in two quarts of water till the whole is pulpy, and add four onnces of ointment of marſh-mallows, and a ſufficent quantity of hogs lard, to prevent its growing ſtiff and dry.

In five or ſix days, by theſe means, the matter is generally formed, and makes its way through the ſkin; and if the diſcharge is made freely and with eaſe, the opening need not be enlarged; but ſhould be dreſſed with the following ointment ſpread on tow, ſtill continuing the poultice over it to promote the digeſtion, and prevent any remaining hardneſs.

A general digeſtive ointment.

TAKE roſin and Burgundy pitch, of each a pound and a half; honey and common turpentine, each eight ounces; yellow wax four ounces; hogs-lard one pound; verdigreaſe, finely powdered, one ounce: melt the ingredients together, but do not put in the verdigreaſe, till removed from the fire; and it ſhould be ſtir-

red in by degrees, till the whole is grown ſtiff and cool.

Bleeding ſometimes neceſſary.

If the fever and inflammation run high, and the ſwelling be ſo ſituated as to endanger ſuffocation, a moderate quantity of blood muſt be taken away, and the remainder diluted with plenty of water-gruel, or warm water, maſhes, *&c.*

Obſervation.

The running at the noſe, which often attends the ſtrangles, is dangerous; eſpecially if it continues after they have ripened and broke, as the horſe will be greatly weakened thereby. To prevent this waſte and decay, give him every day for ſome time an ounce of Jeſuit's bark; or a ſtrong decoction of guaiacum ſhavings, which hath been found extremely beneficial in reſtraining theſe glandular diſcharges when too liberal, and in drying up ulcers of all kinds in horſes. *Vide* Chapter on GLANDERS.

If a hardneſs remains after the ſores are healed up, they may be anointed with the mercurial ointment; and, when the horſe has recovered his ſtrength, purging will be neceſſary.

The vives deſcribed.

The vives or ives differ from the ſtrangles only in this, that the ſwellings of

of the kernels under the ears of the horſe (which are the parts at firſt chiefly affected) ſeldom gather, or come to matter, but by degrees perſpire off, and diſperſe, by warm cloathing, anointing with the marſh-mallow ointment, and a moderate bleeding or two. But, ſhould the inflammation continue, notwithſtanding theſe means, a ſuppuration muſt be promoted by the methods above recommended in the ſtrangles.

When theſe ſwellings appear in an old or full-aged horſe, they are ſigns of great malignity, and often of an inward decay, as well as forerunners of the glanders.

The mercurial ointment, above-mentioned, may be prepared thus:

A mercurial ointment.

TAKE of crude mercury, or quick-ſilver, one ounce; Venice turpentine half an ounce; rub them together in a mortar till the globules of the quick-ſilver are no longer viſible; then add two onnces of hogs-lard.

Obſervation.

Some authors recommend this ointment to be uſed at firſt, in order to diſperſe the ſwellings, and prevent their coming to matter; bleeding and purg-

ing at the ſame time for that purpoſe; but as in young horſes they ſeem to be critical, the practice by ſuppuration is certainly more eligible and ſafe; for want of properly effecting which, the humours frequently ſettle, or are tranſlated to the lungs, and other bowels; or falling on the fleſhy parts of the hind quarters form deep impoſthumes between the muſcles, which diſcharge ſuch large quantities of matter, as ſometimes kill the horſe, and very often endanger his life.

CHAP. XI.

Of the Diſeaſes of the EYES.

The diſeaſes of the eyes diſtinguiſhed.

IN order to make the diſorders of the eyes well underſtood, we ſhall conſider them as ariſing from different cauſes: external injuries affecting the globe of the eye; and from internal cauſes affecting the humours within the globe. We ſhall conſider alſo the eye as naturally weak from a bad conformation, which

which poſſibly may often be hereditary.

We ſhall thus be able to form a proper judgment when waſhes, and external applications, are really uſeful, and to be depended on; and when it is not only abſurd to apply them, but even extremely pernicious.

In all recent diſorders of the eye from external injuries, ſuch as blows, bites, *&c.* attended with a ſwelling of the lid, and a running from the eye, you muſt firſt ſponge the part often with cold ſpring water and vinegar; and if much ſwelled bleed immediately, and apply over it a poultice made of the pulps of roaſted or boiled apples, cleared from their ſeeds and huſks; or of conſerve of roſes and vinegar, with a little bole, and the white of an egg. When the ſwelling is abated, either of the following waſhes will complete the cure. The cure of external injuries.

TAKE white vitriol, half an ounce, ſugar of lead two drams; diſſolve in a pint of ſpring water; to which may occaſionally be added, when the rheum is very great, and in- A cooling eye-water

flammation removed, half an ounce of tutty, or compound powder of ceruſs.

How uſed. Let the eye and eye lid be bathed three or four times a day with a clean ſponge dipped in this waſh; or it may be applied with a feather, leaving a few drops on the eye. When the veins under the eye have been turgid, opening them with a lancet has often been found ſucceſsful.

Mr. Gibſon from his own experience recommends the following, with which alone he has ſucceeded in moſt common caſes.

Another repelling eye-water. TAKE two drams of roſe-buds, infuſe them in half a pint of boiling water; when cold, pour off the infuſion, and add to it twenty grains of ſugar of lead.

This is to be uſed as the former; but I think the quantity of ſugar of lead too ſmall, and may occaſionally be increaſed.

Sometimes

Sometimes from the violence of the inflammation, ſucceeding blows, and external injuries, the coats of the eye ſhall loſe their tranſparency, thicken, and turn white, or pearl colour; in the latter caſe the horſe has ſome glimmering of light; in the former he is blind, while the eye continues in this ſtate. Extraordinary ſymptoms

This appearance may ariſe from a ſtagnation of the lymph, or juices circulating in the cornea, which in their natural ſtate are clear and thin, but undergo this change by the heat and inflammation; a white bliſter often forms on the cornea, the ſize ſometimes of a grape; this always proves a relief, and when it breaks, haſtens the cure. How cauſed.

In all theſe diſorders, the degree of inflammation and obſtruction is chiefly to be attended to, which muſt regulate the preceding remedies in regard to their ſtrenth, ſo as to proportion them to the exigency of the ſymptoms. Caution.

If the horſe be fleſhy, and of a groſs conſtitution, bleeding may be repeated; and a rowel will be neceſſary: let his diet be ſcalded bran or barley; avoiding for The cure of inflammations.

ſome days oats, beans, or any thing hard to chew.

The cooling opening drink, p. 35. ſhould be given every other day, which will anſwer better than aloetic purges.

Obſervation. If the eyelids continue ſwelled and moiſt, and the under ſide of the eye inflamed, an ounce of honey may be added to four ounces of the above waters; or the part may be well bathed with an ounce of honey of roſes, and half a dram of ſugar of lead, diſſolved in three ounces of ſpring water: to which may be added, when the eye is very watery, a ſpoonfull or two of red wine, which will help to thicken the matter and dry it up.

A film how removed. If a film or thick ſlough ſhould remain it may be taken off, by blowing into the eye equal parts of white vitriol and ſugar-candy, finely powdered.

Glaſs finely powdered, mixed up with honey and a little freſh butter, is much recommended by Dr. Bracken for this purpoſe; as alſo the following ointment.

TAKE

TAKE ointment of tutty one ounce, honey of roſes two drams, white vitriol burnt one ſcruple: this with a feather may be ſmeared over the eye twice a day. An ointment for films on the eye.

The aq. ſapphirina and the juice of celandine are recommended alſo for this purpoſe, a few drops of either being put on the eye every day. For the ſame purpoſe, as alſo for bruiſes and other diſorders of the eye, the following will be found uſeful.

TAKE eyebright and celandine of each two handfuls, roſemary tops half a handful, roſin half an ounce; chop the herbs and boil them over a gentle fire in three pints of cream, till it comes to a green oil, then ſtrain through a fine cloth, and keep in a gallipot for uſe. An ointment for bruiſes, &c.

The quantity of a ſmall bean may be put in the horſe's eye, night and morning.

The next is the famous ointment of Sir Hans Sloane, where I have only taken the

the liberty to double the quantity of aloes.

Sir Hans Sloane's ointment.

TAKE of prepared tutty one ounce, of lapis hæmatitis prepared two ſcruples, of the beſt aloes twenty-four grains, of prepared pearl four grains; put into a marble mortar, and mix with a ſufficient quantity of vipers fat.

Some obſervations on it.

This medicine, like other noſtrums, was in great eſteem while it remained a ſecret; but ſince the diſcovery of it, and an examination of the compoſition, it appears to vary in nothing from the common practice, except in the ſubſtitution of the vipers fat for lard, or freſh butter. It ought alſo to be remarked in Sir Han's account, that, in the application, he calls to his aſſiſtance all the means medical practice has hitherto employed in caſes of this kind; as bleeding, cupping, bliſtering, iſſues, alteratives, *&c.*—So that either ſome of theſe methods muſt do very little, proportionably to the trouble they give, or his medicine leſs, to render both neceſſary. This form may however be preferable to waſhes, or eye-waters, as it will remain longer on the parts affected.

Let

Let it be remembered, that is has long been obſerved in practice, that the eye in its firſt ſtate of inflammation is ſo very tender, that the eye-waters prepared with tutty, and other powders, aggravate the diſorder; conſequently, during this ſtate, the tinctures of vegetables, and ſolutions of ſalts, are greatly preferable. Proper cautions.

Wounds of the eye may be dreſſed with honey of roſes alone, or with a little ſugar of lead mixed with it, adding thereto, after a few days, an eighth part of tincture of myrrh; all the preceding directions in regard to inflammation being attended to, eſpecially bleeding, rowels, and gentle cooling phyſick. Wounds of the eye, how treated.

When the humours of the eye are thickened, and the diſorder is within the globe, ſharp external applications are not only uſeleſs, but extremely detrimental, by the irritation they occaſion, and conſequently ſhould be avoided. Obſervation.

In all caſes of this ſort, whether moon eyes, which are only cataracts forming, or in confirmed ones attended with a weeping, general evacuations, with internal alteratives, can only take place. Let us deſcribe

deſcribe theſe internal diſorders with their ſymptoms.

The ſymptoms of moon eyes and cataracts.

Theſe generally make their appearance, when a horſe is turned five, coming ſix; at which time one eye becomes clouded, the eyelids being ſwelled, and very often ſhut up; and a thin water generally runs from the diſeaſed eye down the cheek, ſo ſharp as ſometimes to excoriate the ſkin; the veins of the temple, under the eye, and along the noſe, are turgid and full: though ſometimes it happens that the eye runs but little.

This diſorder comes and goes till the cataract is ripe; then all pain and running diſappear, and the horſe becomes totally blind, which is generally in about two years. During this time ſome horſes have more frequent returns than others; which continue in ſome a week or more, in others three or four; returning once in two or three months, and they are ſeldom ſo long as five without a relapſe.

A dry cataract deſcribed.

There is another kind of moon blindneſs, which is alſo the forerunner of cataracts, where no humour or weeping attends. The eye is never ſhut up or cloſed here, but will now and then look thick

thick and troubled, at which time the horſe ſees nothing diſtinctly: when the eyes appear ſunk and periſhing, the cataracts are longer coming to maturity; and it is not unuſual in this caſe for one eye to eſcape.

Theſe caſes generally end in blindneſs of one, if not of both eyes: the moſt promiſing ſigns of recovery are when the attacks come more ſeldom, and their continuance grows ſhorter, and that they leave the cornea clear and tranſparent, and the globe plump and full. The general event.

The atttempts to cure cataracts have hitherto been only palliative, and mitigating the ſymptoms; yet early care has ſometimes been ſucceſsful. To this end the horſe ſhould be rowelled and bled at proper intervals; except where the eyes appear ſunk and periſhing, where it is often pernicious. During the violence of the ſymptoms, obſerve the cooling treatment above recommended, giving him two ounces of nitre every day mixed into a ball with honey, and bathe the parts above the eye with verjuice, or vinegar, wherein roſe-leaves are infuſed; to four ounces of which, half a dram of ſugar of lead may be added. The ſwell- The cure of cataracts.

ing

ing on the lid may afterwards be bathed with a ſponge dipt in equal parts of lime and Hungary water, mixed together: the cooling phyſick, p. 18, ſhould be given every fourth day till the eye becomes clear, and recovers its uſual brightneſs. The following alſo is very proper phyſick for this purpoſe:

TAKE lenitive electuary, and cream of tartar, of each four ounces; Glauber's ſalts, three ounces; ſyrup of buckthorn, two ounces.

When the weeping is by theſe means removed, the alterative powders (ch. xxi.) ſhould be given every day, till two or three pounds are taken, and, after an interval of three months, the ſame courſe ſhould be repeated. This method has often been attended with good ſucceſs, where the eyes have been full, and no way periſhed; in that caſe bathe or foment them with the following, twice a day.

TAKE crude ſal armoniac two drams, diſſolve it in a pint of lime-water, and add to it four ounces of brandy, or Hungary water.

This

This will act as a ſtimulus, and may help to thin and rarefy the gummy juices, and bring new ſupplies of nouriſhment to the periſhing eyes.

Mercurials recommended.

This courſe not ſucceeding, in order more powerfully to open the veſſels of the chryſtalline humour (which in theſe caſes is always found opake, and when the cataract is confirmed, intirely loſes its tranſparency) and hinder as much as poſſible the forming of obſtructions, mercurials are chiefly to be depended on: thus give every other day, for three or four mornings, two drams of calomel, mixed up with conſerve of roſes; and then purge off with the common ball.

The alteratives that are to be depended on.

During this courſe particular care ſhould be taken of the horſe: after repeating this, the alterative powders before-mentioned ſhould be given, for ſome weeks or months, if you expect any benefit from them; or they may be beat up into a ball with live millepedes, and an ounce and a half given every day: if theſe ſhould not ſucceed, and the horſe is a valuable one, the turbith courſe, recommended in the chapter on alteratives, ſeems to be the moſt promiſing method left. But to horſes

norſes that are not ſo, an ounce of antimony ground into an impalpable powder, may be given every day in one of his feeds, for three months or longer; or a ſtrong decoction of guaiacum ſhavings may be given for ſome time, to which crude antimony may be given in the following manner.

An alterative drink.

TAKE guaiacum ſhavings one pound, crude antimony tied in a rag, the ſame quantity; boil in two gallons of forge-water to one, and give a quart a day, either alone, or mixed with his water.

Dr. Bracken adviſes as much as will lie on a ſixpence, of the following powder, to be blown up the horſe's noſtrils once a day.

A ſtimulating ſnuff.

TAKE turbith mineral two drams, aſſarabacca powdered, half an ounce; mix, and keep in a bottle, well corked.

Nor let any one wonder at the tediouſneſs of the courſe here recommended, as the intention in curing is to alter the whole maſs of fluids, to fuſe and attenuate them in ſuch a manner, that they

may circulate freely through the minuteſt veſſels, particularly thoſe of the eye, which are exquiſitely fine; and when the blood is in a viſcid ſtate, may be ſuppoſed eaſily retarded in its circulation through them; the conſequence of which, if not ſoon removed, when once fixed, will be an immediate obſtruction, and of courſe occaſion total blindneſs.

Tying up the temporal arteries is by ſome much commended, eſpecially in full eyes; for by this means the circulation of the blood to them is greatly impeded: but to flat depreſſed eyes this operation muſt be injurious, as it would deprive them of their neceſſary nouriſhment, and tying up the veins would ſeem here the moſt proper. But the taking up the veins where the eyes are full, muſt for the moſt part prove hurtful, by cutting off the channels which ſhould convey the blood and juices from them into the courſe of circulation, and conſequently increaſe the diſtemper, inſtead of abating it. Obſervations.

The haws is a ſwelling and ſpunginеſs that grows in the inner corner of the eye, ſo large ſometimes as to cover a part of the eye. The operation here is eaſily The haws what.

performed by cutting part of it away; but the farriers are apt to cut away too much: the wound may be dreſſed with honey of roſes; and if a fungus or ſpongy fleſh ariſes, it ſhould be ſprinkled with burnt alum, or touched with blue vitriol.

CHAP. XII.

Of the GLANDERS.

The glanders, hitherto but little underſtood.

THE cauſe and ſeat of the glanders has till lately been ſo imperfectly handled, and ſo little underſtood by the writers of this diſtemper, that it is no wonder it ſhould be ranked among the *incurables*: but a new light having been thrown on this whole affair by the ſtudy of M. La Foſſe, the King of France's farrier, who has been at the pains to trace out, and diſcover, by diſſections, the ſource and cauſe of this diſorder; we hope the method he has propoſed, with ſome further experiments and improvements, will ſoon bring to a certainty of cure (in moſt caſes at leaſt) a diſtemper

ſo

ſo dangerous to our horſes, and that hitherto has eluded the force of art.

Before we make mention of this work, which has the approbation of the Royal Academy of Sciences, it will not be unacceptable to our readers, we apprehend, to have a more particular account of the ſymptoms of this diſorder from M. La Foſſe, that we may the better judge of the merit of our author and his diſcoveries.

This gentleman then has diſtinguiſhed ſeven different kinds of glanders, four of which are incurable.

The firſt proceeds from ulcerated lungs, the purulent matter of which comes up the trachea, and is diſcharged through the noſtrils, like a whitiſh liquor, ſometimes appearing in lumps and grumes: in this diſorder, though the matter is diſcharged from the noſtrils, yet the malady is ſolely in the lungs.

The ſecond is a waſting humour, which uſually ſeizes horſes at the decline of a diſeaſe, cauſed by too hard labour: this defluxion alſo proceeds from the lungs.

The third is a malignant diſcharge, which attends the ſtrangles ſometimes, and falls upon the lungs, which runs off by the noſtrils.

The fourth is, when an acrimonious humour in the farcy ſeizes theſe parts, where it ſoom makes terrible havock.

The fifth kind we ſhall deſcribe by and by, as ariſing from taking cold.

The ſixth kind is a diſcharge from the ſtrangles, which ſometimes vents itſelf at the noſtrils. *Vide* STRANGLES, chap. X.

Theſe are the various diſorders which have been obſerved ſometimes to throw matter out from the noſtrils; let us now deſcribe the real glanders.

The general ſymptoms.

The matter then diſcharged from the noſtrils of a glandered horſe, is either white, yellow, or greeniſh, ſometimes ſtreaked, or tingid with blood: when the diſeaſe is of long ſtanding, and the bones are fouled, the matter turns blackiſh, and becomes very fœtid; and is always attended with a ſwelling of the kernels or glands under the jaws; in every other reſpect

reſpect the horſe is generally healthy and ſound, till the diſtemper has been of ſome continuance.

Particu ſymp- toms.

It is always a bad ſign, when the matter ſticks to the inſide of the noſtrils, like glue or ſtiff paſte; when the inſide of the noſe is raw and looks of a livid, or lead colour: when the matter becomes bloody, and ſtinks, and when it looks of an aſh colour. But when only a limpid fluid is firſt diſcharged, and afterwards a whitiſh matter, the gland under the jaw not increaſing, and the diſorder of no long continuance, we may expect a ſpeedy cure; for in this caſe, which ariſes from taking cold, after a horſe has been over-heated, the pituitary membrane is but ſlightly inflamed, the lymph in the ſmall veſſels condenſed, and the glands overloaded, but not yet ulcerated.

Obſerva tion.

From theſe ſymptoms and ſome obſervations made both by Braken and Gibſon, it is plain they were not abſolute ſtrangers to the ſeat of this diſorder, though they neglected puſhing their enquiries to the fountain-head, and conſequently were at a loſs to know how to apply the remedy to the parts affected.

Diſſections prove the ſeat of the glanders to be in the cavities of the head, and not in the viſcera.

But our author, after examining by diſſection, the carcaſſes of glandered horſes, and making a ſtrict ſcrutiny into the ſtate of the *viſcera*, aſſiſted for that purpoſe by ingenious and expert anatomiſts, for ten years together, affirms this diſeaſe to be altogether local; and that the true ſeat of it is in the *pituitary* membrane, which lines the partition along the inſide of the noſe, the *maxillary ſinuſſes* or cavities of the cheek-bones on each ſide the noſe, and the frontal *ſinuſſes* or cavities above the orbits of the eyes; that the *viſcera*, as liver, lungs, *&c.* of glandered horſes are in general exceeding ſound; and conſequently that the ſeat of this diſorder, is not in thoſe parts, as has been aſſerted by moſt authors; nor indeed is it probable it ſhould: for how could ſuch horſes preſerve their appetite, their good appearance, ſleek and ſhining coats; in a word, all the ſigns of health for many years together (which many glandered horſes are known to enjoy) with ſuch diſtempered bowels?

Ocular demonſtration of it.

But on nicely examining the heads of ſuch horſes, he found the cavities above-mentioned, more or leſs, filled with a viſcous ſlimy matter, the membrane which

which lines both them and the noſtrils inflamed, thickened, and corroded with ſordid ulcers, which in ſome caſes had eat into the bones. Theſe *ſinuſſes* or cavities will be better underſtood by referring to the annexed plate.

Some curious obſervations.

He obſerves, that when glandered horſes diſcharge matter from both noſtrils, both ſides of the membrane and cavities were affected; but when they ran at one noſtril only, that ſide only was found diſtempered.

It is a curious remark of our author, that the ſublingual glands, or the kernels ſituated under the jaw-bone, which are always ſwelled in this diſtemper, do not diſcharge their lymph into the mouth, as in man, but into the noſtrils; and that he conſtantly found their obſtruction agreed with the diſcharge: if one gland only was affected, then the horſe diſcharged from one noſtril only, but if both were, then the diſcharge was from both.

The bones ſometimes rotten.

He ſometimes, though rarely, found the bony partition of the noſe carious or rotten; but that the ſpongy bones about this part muſt ſuffer from the acrimony

of matter long pent up, is not at all to be doubted, though the more ſolid ones may eſcape.

The cure by trepaning.

The ſeat of this diſorder thus diſcovered, our author with great ingenuity has paved the way for cure, by trepanning theſe cavities, and taking out a piece of bone; by which means the parts affected may be waſhed with a proper injection, and, in fine, the ulcers eterged, healed, and dried up.

By injections and fumigations.

But as from the obſervations ſince made by this gentleman, there are different ſpecies of the glanders, ſo the cure of the milder kinds may firſt be attempted by injections and fumigations. Thus after taking cold, ſhould a horſe, for fifteen or twenty days, diſcharge a limpid fluid, or whitiſh matter, from one or both noſtrils, the glands under the jaw rather growing harder than diminiſhing, we may expect it will degenerate into a true glanders. To prevent which, after firſt bleeding, and treating him as we have directed for a cold, let an emollient injection, prepared with a decoction of linſeed, marſh mallows, elder, camomile-flowers, and honey of roſes, or ſuch like, be thrown up as far as poſſible

ſible with a ſtrong ſyringe, and repeated three times a day: ſhould the running leſſen, or be removed in a fortnight by the uſe of this injection, a reſtringent one may now be prepared with tincture of roſes, lime-water, *&c.* p. 126. and the noſtrils fumigated with the powders of frankincenſe, maſtich, amber, and cinnabar, burnt on an iron heated for that purpoſe; the fume of which may eaſily be conveyed through a tube into the noſtrils.

This method has been found ſucceſsful when uſed in time; but the methods of cure depend on the ſtubbornneſs of the diſorder, and when inveterate, recourſe muſt be had to the operation above deſcribed.

The ſucceſs in regard to the operation.

This operation he has performed on three horſes; two of whom diſcharged from one noſtril only, and the third from both: the two firſt he trepanned on that ſide of the head which was affected, and to the other he performed it on both; and found that the wound and perforation filled up with good fleſh in twenty-ſix days, and that the horſes ſuffered no inconvenience from the operation;

tion; though after this experiment they were put to death.

Why not broughtto perfection in France.

The directions and orders of the civil government of France, which hinder people from keeping glandered horſes long, prevented M. La Foſſe repeating his attempts, and puſhing his experiments further; but it is to be hoped that ſo uſeful a project will be purſued to its utmoſt extent, as it ſeems ſo promiſing in the execution, and is ſo important in its conſequences: to which end we ſhall beg leave to animadvert on what has been ſaid, and offer our opinion both in relation to the diſeaſe, the operation, and the manner of conducting the cure.

Proved to ariſeorigi- nally from an inflam- mation.

In order to prove that a great inflammation of the pituitary membrane is always the cauſe of the glanders, M. La Foſſe has attempted to bring on an inflammation upon the ſame membrane, by a corroſive injection; and when the injection was only thrown into one ſide, the maxillary lymphatic glands were ſwelled on the ſame ſide, and that noſtril only produced the diſcharge; but when both noſtrils were injected, theſe ſymptoms appear on both ſides. This gentleman has alſo obſerved, that the bone of

of the maxillary ſinus being broke by the kick of another horſe, the uſual ſymptoms of the glanders ſoon appeared, from the inflammation the pituitary membrane ſuffered on the occaſion.

The original ſource and cauſe then of this diſorder, ſeems to be an inflammation of the glands, and membrane that lines the noſtrils and theſe cavities; which, if not diſperſed in time, will form matter, and ulcerate and erode the bones, for want of a free diſcharge to unload the cavities, and of proper applications to cleanſe and deterge the ulcers: violent colds, or a feveriſh tranſlation, ſetting here may alſo occaſion the ſame complaint, and are probably the general cauſes. The true cauſe and ſeat of the glanders.

There is a diſorder in men, called *ozena*, that has great ſimilitude to this in horſes, and ariſes often from an inflammation in the *maxillary ſinuſſes*, or cavities in the cheek-bones, from whence enſues a collection of matter; which when the cavity is full, or the head properly inclined, runs over into the noſe, and would conſtantly diſcharge thence like a glandered horſe, was the head continued in the ſame poſition. The ſurgical An analogy between the glanders, and mattergathered in the cheek-bone of man.

ſurgical cure is the taking out one or more teeth from the upper jaw, and perforating the cavity with a proper inſtrument, in order to make a depending orifice for the matter to flow through; and to make way for ſyringing the parts affected with proper injections, which in this caſe are thrown through the cavity into the noſe.

The method of cure in both much alike.

The ſimilarity of theſe two caſes, with the method of cure, and the ſucceſs attending the ſurgical treatment (which was firſt invented and perfected by our countrymen Drake and Cowper) undoubtedly gave the firſt hint for trepanning, and ſyringing theſe cavities in horſes; and it is moſt probable, that when the operation is attempted in time, before the bones become rotten, it will be attended with equal ſucceſs; but after opening the cavities, ſhould it by probing be diſcovered, that the bones are in that ſtate, the beſt way then would be to diſpatch the horſe, to prevent unneceſſary trouble and expence.

The parts fixed on for applying the trepan, are pointed out in the plate, and the manner of ſawing out the bone will eaſily be underſtood by a view of the inſtru-

inſtrument, and the explanation annexed.

The perforations being made, our next buſineſs is to prevent their filling up too faſt; as it may be neceſſary to keep them open for ſome weeks before a cure can be effected; for which purpoſe, after the uſe of the injection, let the upper one be filled up with a piece of cork, waxed over, and adapted exactly to its ſize: the lower one may be kept open with a hollow leaden tent, through which there will be a conſtant drain of matter fron the ſinuſſes, which will be greatly favoured by this depending orifice, and both be detained by a proper bandage. Directions to be obſerved after the operation.

If this method ſhould not prevent the granulations, or ſhoots of the fleſh, from filling up ſo faſt as to choak up the perforation, and by that means hinder the injections paſſing freely; they muſt be ſuppreſſed by rubbing with cauſtic medicines, or touching with the actual cautery; as may alſo the bony edges; which by obliging them to exfoliate or ſcale off, will retard the healing. Cauſticks, and cautery may be neceſſary.

Injections recommended.

The injections firſt made uſe of, ſhould be of a deterſive nature; as a decoction of birthwort, gentian, and centaury: to a quart of which, if two ounces of Ægyptiacum and tincture of myrrh are added, it may be as proper as any; and when the diſcharge is obſerved to abate, and the colour alter to a thick white matter, the injection may be changed for barley-water, honey of roſes, and tincture of myrrh; and, finally, to dry up the humidities, and recover the tone of the relaxed glands, Bate's alum water, or a ſolution of colcothar, vitriol, lapis medicamentoſus, or ſuch like, in lime-water, will moſt probably compleat the cure. Dr. Bracken recommends the following:

TAKE of alum and white vitriol powdered, of each four ounces; calcine them in a crucible; when cold, powder the calx, and mix it with a gallon of lime-water, and a quart of vinegar: decant the clear for uſe.

Internals neceſſary to compleat the cure.

But whoever is at all acquainted with practical ſurgery, well knows that without the aſſiſtance of internals, eſpecially in

in glandular diſorders, the cure is not ſo eaſily effected, nor rendered compleat or laſting: I therefore adviſe a ſtrong decoction of guaiacum chips to be given every day, to a quart or three pints, throughout the cure, and when the matter leſſens, to purge at proper intervals, and put a rowel into the horſe's cheſt, in order to divert the fluids from their old channel: if theſe ſhould not ſucceed, mercurials may be given with the phyſick; and the alterative powders with lime-water may be taken for a time, if the horſe is worth the expence. *Vide* Chapter on ALTERATIVES.

An EXPLANATION *of the* Heads *and* Trepan.

B. B. two lines repreſenting the bounds of the cerebellum, or back part of the brain, which is very ſmall in a horſe, in proportion to that of a man, as well as the brain itſelf, which commences from the line D.

C. C. a line where the ſuperior part of the ſinus frontalis commences, together with

with a view of the bottom of the ſinus, which terminates between the lines D and E, where there appears a ſubſtance in the form of a pear, which is the os ethmoides, or ſieve-like bone; through which the olfactory nerves paſs, by which the pituitary membrane receives its ſenſibility, and the ſenſe of ſmelling is performed.

E, repreſents the beginning of the maxillary ſinus, which terminates at M.

The ſhaded ſpace which may be obſerved between theſe two lines, repreſents the great cavities. The oblique ray marked F, is a bony partition, which ſeparates this ſinus into two parts, that have no communication: and ſometimes it happens (though but rarely) that there are two bony partitions; and for this reaſon they are repreſented by the lines marked F and G. It alſo ſometimes happens (but ſtill more ſeldom) that there are horſes, in whoſe heads we do not find any of theſe bony partitions.

N, points out the place of the cornets or horns. O, the redoubling. P, their middle part. Q, the inferior part of them.

them. M, the bony canal or pipe which guards the maxillary nerve.

A, A, the ſeptum narium, or partition which divides the noſe from top to bottom, and conſtitutes the two noſtrils.

L, in the head that is intire, points out where the trepan ſhould be applied on the frontal ſinus, when we have reaſon to believe the glanders is ſpread into this ſinus. However, I think it ſafeſt to apply it firſt on E, for the reaſons mentioned in the next explanation, and becauſe the brain may be endangered, ſhould the ſinus be miſtook.

E, the place where the trepan may be applied, in order to cleanſe the maxillary ſinus. The round mark between D and E (which is the impreſſion of the trepan) is however on experience preferred by the author, as the propereſt place; as one orifice would then be ſufficient to waſh all the parts both above and below, with the injection.

But in general, when the maxillary ſinus only is affected, penetrate but the upper part, where the ſyringe points, or thereabouts, and your expectations will

be anſwered; ſhould they not, there ſeems ſo little danger in the operation, that you may again perforate at the places above-mentioned, higher up. But a proper number of experiments will ſoon ſettle this point with certainty.

H, in the head that is intire, points out the place where another hole or perforation ſhould be made, as a drain to give iſſue to the glanderous matter waſhed away by the injection; which could not be diſcharged without ſuch a depending orifice; and perhaps this perforation alone, in many recent caſes, would be ſufficient, provided the injection paſſed freely upwards, and the hole was kept open by means of a hollow leaden pipe conſtantly retained in it for that purpoſe, and to procure a free paſſage for the matter.

I, repreſents the injection puſhed in by the ſyringe, which flows out by the orifice and the noſtril K; during the uſe of the ſyringe, it is neceſſary to hold the noſtrils cloſe.

If, in the maxillary ſinus, inſtead of one, there happens to be two bony partitions, it is abſolutely neceſſary to pierce through

through them both, by means of a ſtiletto, or ſharp-pointed tuck, as in the manner repreſented in the cut of a horſe's head opened; though this conformation ſeldom occurs.

As theſe bony partitions may in ſome particulars vary, ſhould the ſtiletto not have the deſired effect, and the injection thrown in by the ſyringe not come out at H; in ſuch caſe the liquor ſhould be injected upwards, through the orifice made by the ſtiletto or trepan at H.

As in young horſes the frontal and maxillary ſinuſſes are very ſmall, it will be proper to direct the trepan towards the interior part of the noſe; otherwiſe the inſtrument might work upon the roots of the teeth, which incline towards the ſinus, and would in ſuch caſe be an inſurmountable obſtacle to the operation.

R, the inſtrument or trepan. S, the handle which turns it. T, the ſaw-part to be applied to the bone.

From a view of this inſtrument, the manner of working it will appear ſimple and eaſy; the cooper's managing his wimble being a proper directory.

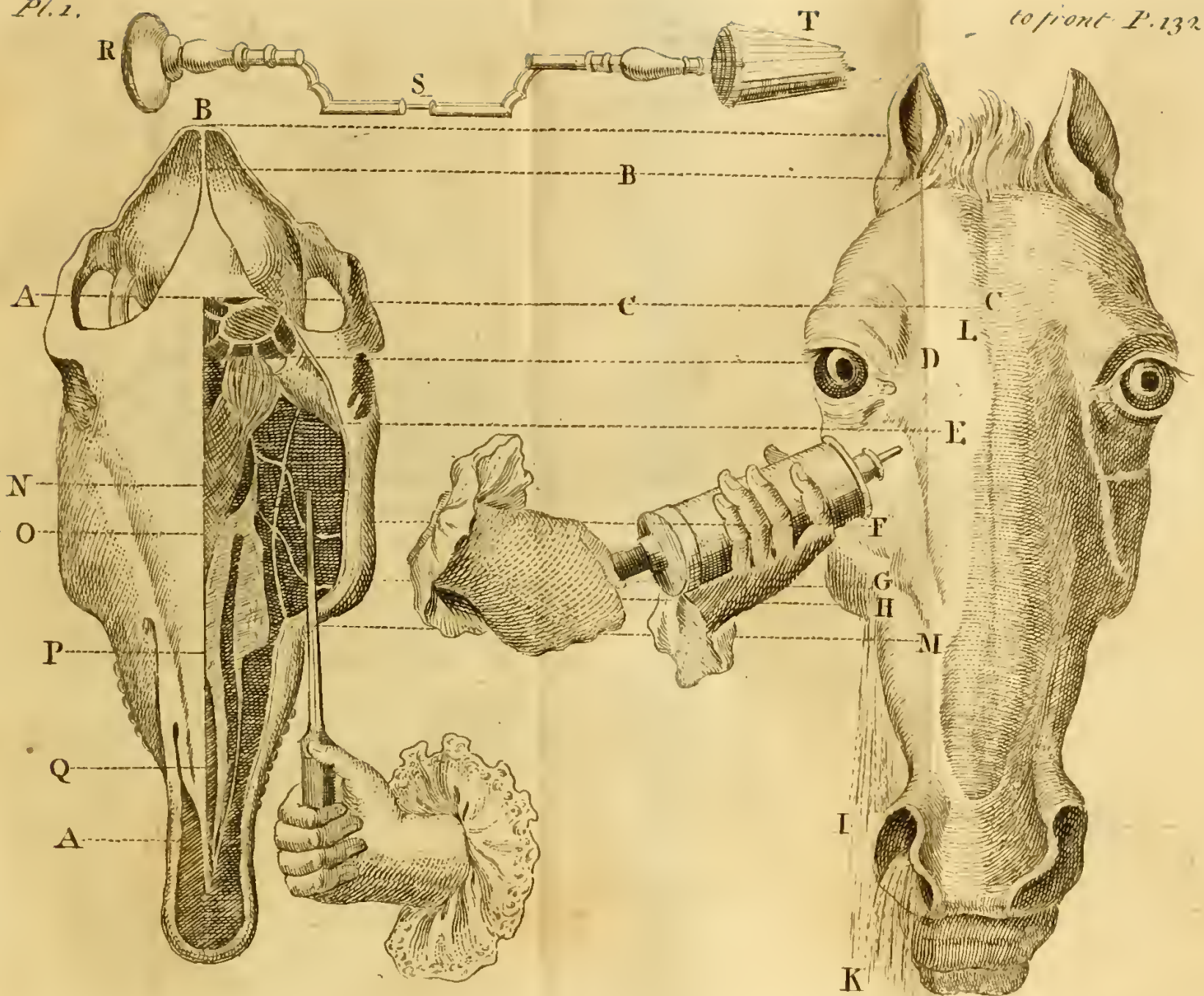
The inſtrument called the *trephine*, which is chiefly uſed by our Engliſh ſurgeons in perforating the ſkull, will equally anſwer this purpoſe; and if any difficulties ſhould ariſe, notwithſtanding this deſcription, the gentlemen of the faculty will ſoon make it familiar and intelligible.

Before the application of the trepan, or trephine, it is quite neceſſary to obſerve, that a circular piece of the ſkin ſhould firſt be cut off, with the membrane which covers the bone, about the ſize of a half-crown piece; in order to make the inſtrument work the eaſier, and to prevent the inconveniencies which might ariſe from the external wound's healing up too faſt.

The ſyringe ſhould be large enough to contain half a pint of injection.

CHAP.

to front P. 132.



CHAP. XIII.

Of the CHOLIC *or* GRIPES, *and* Pains *in the* Bowels, *from ſudden Accidents.*

THERE ſeems to be no diſtemper ſo little underſtood by the common farrier, as the cholic or gripes in horſes, one general remedy or method ſerving them in all caſes; but as this diſorder may be produced by very different cauſes, the method of cure muſt alſo vary, otherwiſe the intended remedy injudiciouſly applied, will not only aggravate the complaint, but make it fatal. We ſhall divide this diſorder into three different ſpecies; the flatulent or windy, the bilious or inflammatory, and the dry gripes; each of which we ſhall diſtinguiſh by their different ſymptoms, and then point out the proper remedies.

The gripes in horſes, little underſtood by farriers.

The different kinds of gripes.

The flatulent or windy cholic is thus known. The horſe is often lying down, and as ſuddenly riſing again with a ſpring; he ſtrikes his belly with his hinder feet, ſtamps with his fore feet, and

The ſymptom of wind-cholic.

refuſes his meat; when the gripes are violent, he will have convulſive twitches, his eyes be turned up, and his limbs ſtretched out as if dying, his ears and feet being alternately very hot and cold; he falls into profuſe ſweats, and then into cold damps; ſtrives often to ſtale, and turns his head frequently to his flanks; he then falls down, rolls about, and often turns on his back; this laſt ſymptom proceeds from a ſtoppage of urine, that almoſt always attends this ſort of cholic, which may be increaſed by a load of dung preſſing on the neck of the bladder.

Cribbing horſes very ſubject to this cholic.

Theſe are the general ſymptoms of cholic and gripes from wind, drinking cold water when hot, and when the perſpirable matter is retained, or thrown on the bowels by catching cold; in all which caſes they are violently diſtended. Cribbing horſes are more particularly ſubject to this complaint, by reaſon they are conſtantly ſucking in great quantities of air.

The cure.

The firſt intention is to empty the ſtrait gut with a ſmall hand dipt in oil, which frequently makes way for the confined wind to diſcharge itſelf; and by eaſing

eaſing the neck of the bladder, the ſuppreſſion of urine is taken off, and the horſe ſtales and gets eaſe.

Farriers generally ſtrike a fleam into the bars of a horſe's mouth, which ſeems to be of little or no uſe; for where a quantity of blood is intended to be taken away, the veſſels of this part are neither large or numerous enough to furniſh it; ſo that it is more eligible to take it from the neck vein, and is always proper in full, ſanguine, plethoric, young horſes.

The following ball and glyſter ſeldom fail of giving relief in theſe caſes.

A ball for the ſtrangury in the windcholic.

TAKE Straſburg or Venice turpentine, and juniper-berries, pounded of each half an ounce; ſal prunella, or ſalt-petre, an ounce; oil of juniper one dram; ſalt of tartar two drams: make into a ball with any ſyrup. It may be given whole, and waſhed down with a decoction of juniper-berries, or a horn or two of ale.

Remark.

If the horſe does not break wind, or ſtale plentifully, he will find no relief; therefore in an hour or two give him ano-

another ball, and add to it a dram of ſalt of amber; which may be repeated a third time, if found neceſſary. During the fit, the horſe may be walked and trotted gently, but ſhould by no means be harraſſed beyond his ability, or dragged about till he is jaded.

A glyſter for wind.

The following glyſter may be given, between the balls, or alone, and repeated occaſionally.

TAKE camomile flowers two handfuls; aniſe, coriander, and fenel ſeeds, of each an ounce; long pepper, half an ounce: boil in three quarts of water to two; and add Daffy's elixir, or gin, half a pint; oil of amber, half an ounce; and oil of camomile, eight ounces.

The ſubſequent balls and drink are alſo very proper for this purpoſe, and to remove gripes occaſioned by drinking cold water when hot, or catching cold after violent exerciſe.

A ball for wind.

TAKE powder of aniſe, cumin, and fennel ſeeds, of each half an ounce; camphor two drams; pellitory of Spain, one dram; oil of juniper, fifty drops:

drops: make into a ball with any syrup, and wash it down with a horn or two of ale.

Or,

TAKE mithridate, or Venice treacle, two ounces; Matthews's pill, two drams; camphor, one dram, dissolved in a little spirit of wine; powder of fresh aniseed one ounce; or the same quantity of the cordial ball; dissolve in a pint and a half of ale. A drink for the same.

Or,

TAKE philonium one ounce, or an ounce and half; tincture of sena, or Daffy's elixir, and sallad oil, of each half a pint; give warm for a drink, and repeat it if necessary. Another drink.

Either of these medicines are well calculated for this purpose; but, as the ingredients may not always be ready at hand, or procurable, we shall put down a couple of drinks, that have frequently on trial been found successful, and are easily prepared. It is to be observed, that the horse should be well rubbed, cloathed, and littered with clean straw up to his belly.

TAKE

Drinks for the same easily prepared.

TAKE of Castile soap, or hard soap, nitre or salt-petre, of each one ounce; juniper-berries and ginger, each half an ounce; Venice turpentine or rosin, dissolved with the yolk of an egg, six drams: mix with a pint and a half of warm ale, or a decoction of juniper-berries, with a large onion boiled with them. This may be repeated twice or thrice.

Or,

Another.

TAKE a pint of brandy, rum, or geneva, with as much sweet oil, and give for a drink. Should this not succeed, boil an ounce of pepper or ginger in a quart of milk, and add to it a handful of salt, and half a pint of oil; this given warm, will (according to Burdon) purge in two or three hours.

Signs of a horse's recovery.

The signs of a horse's recovery, are his lying quiet, without starting, or tumbling, and his gathering up his legs and ceasing to lash out; and if he continues an hour in this quiet posture, you may conclude all danger over.

The

The next ſpecies of cholic we ſhall deſcribe, is the bilious or inflammatory; which, beſides moſt of the preceding ſymptoms, is attended with a fever, great heat, pantivg and dryneſs of the mouth; the horſe alſo generally throws out a little looſe dung, with a hot ſcalding water, which when it appears blackiſh, or of a reddiſh colour, and fœtid ſmell, denotes an approaching mortification. The bilious or inflammatory cholic or gripes, deſcribed.

In this caſe the horſe ſhould immediately be bled to the quantity of three quarts: and it ſhould be repeated, if the ſymptoms do not abate in few hours. The emollient glyſter, with two ounces of nitre diſſolved in it, ſhould be thrown up twice a day, to cool the inflamed bowels; plenty of gum Arabic water ſhould be taken, and a pint of the following drink given every two or three hours, till ſeveral looſe ſtools are procured; and then it ſhould be given only night and morning till the diſorder is removed. The cure.

TAKE ſena three ounces, ſalt of tartar half an ounce; infuſe in a quart of boiling water an hour or two; A cooling purging drink.

two; then ſtrain off, and add two onnces of lenitive electuary, and four of Glauber ſalts.

Bad ſymptoms. If this diſorder is not removed by theſe means, but the inflammation and fever increaſe, attended with a diſcharge of the fleſh-coloured water above deſcribed, the event will moſt probably be fatal: and the chief thing to be depended on now, muſt be a ſtrong decoction of Jeſuit's bark, given to the quantity of a pint every three hours, with a gill of red Port wine.

Aſtrengthning glyſter. A quart of the ſame may be uſed for a glyſter, with two ounces of Venice turpentine, diſſolved with the yolks of two eggs, an ounce of diaſcordium, and a pint of red wine, and given twice a day: if the horſe recovers, give two or three mild rhubarb purges.

To a horſe of little value give the following; which in theſe caſes has been found ſucceſsful.

An alterative ball. TAKE diapente one ounce, diaſcordium half an ounce, myrrh in powder two drams; make it into a ball with two drams of oil of amber,

ber, and given twice or thrice a day.

The dry gripes described.

The laſt we ſhall deſcribe is the dry gripes, or the cholic, which ariſes often from coſtiveneſs: it is diſcovered by the horſe's frequent and fruitleſs motion to dung, the blackneſs and hardneſs of the dung, the frequent and quick motion of his tail, the high colour of his urine, and his great reſtleſsneſs and uneaſineſs.

The cure.

In this caſe the ſtrait gut ſhould be examined, and emptied with a ſmall hand oiled properly for that purpoſe; the emollient oily glyſter, p. 23. ſhould be thrown up twice a day; and the above purging drink given, till the bowels are unloaded, and the ſymptoms removed.

The diet.

The diet for a horſe in the gripes ſhould be ſcalded bran, warm water-gruel, or white water, made by diſſolving four ounces of gum Arabic in a quart of water, and mixing it with his other water.

Some proper cautions and remarks.

From this hiſtory and diviſion of gripes and cholics, with their different treatment, it appears how abſolutely neceſſary it is they ſhould be well underſtood,

ſtood, in order to be managed ſkilfully: it is plain too, that violent hot medicines ſhould in every ſpecies of this diſorder be guarded againſt, and given with grea caution and diſcretion, even in the firſt kind of flatulent cholic, where indeed they can only be wanted; yet too often, when prepared by the farriers, with oil of turpentine, geneva, pepper, and brine, *&c.* they even increaſe that diſorder, by ſtimulating the neck of the bladder too forcibly; heating the blood, and inflaming the bowels, till a mortification is brought on them. Theſe are in general the conſtant appearances of horſes that die of this diſorder, whoſe bowels being examined for that purpoſe, have been found inflamed, full of red and livid ſpots, ſometimes quite blacked, criſped with extreme heat, and rotten.

CHAP. XIV.

Of the Lax *and* Scouring, *with other Diſorders of the* Stomach *and* Bowels,

IT is ſometimes a nice matter to form a proper judgment when to controul or encourage a looſeneſs, but theſe general rules may be a direction: If a healthy full horſe, on taking cold, or upon hard riding, overfeeding, eating unwholeſome food, or with a ſlight fever, ſhould have a moderate purging, by no means think of ſtopping it; but rather encourage it with an open diet, and plenty of warm gruel: but if it continues long, with gripings, mucus of the bowels coming away, and the horſe loſing his appetite and fleſh, it is then high time to give him proper medicines: if he voids great quantities of ſlime and greaſy matter, give him the following drench, and repeat it every other day for three times.

A purging not always to be ſtopt.

TAKE lenitive electuary and cream of tartar, of each four ounces; yellow

An opening drink.

yellow roſin finely powdered, one ounce; and four ounces of ſweet oil: mix with a pint of water-gruel.

The following alterative ball alone has been found ſucceſsful for this purpoſe, when given twice a week, with ſcalded bran and warm gruel.

An alterative ball.

TAKE Succotrine aloes, half an ounce; diapente, one ounce: make into a ball with the juice of Spaniſh liquorice diſſolved in water, and a ſpoonful of oil of amber.

To this may be added two drams of myrrh, and a dram of ſaffron, and (where it can be afforded) half an ounce of rhubarb.

How treated with a fever.

When the purging is attended with a fever, rhubarb ſhould firſt be given, to the quantity of half an ounce, with an ounce and half of lenitive electuary: at night, after the working, give half an ounce or more of diaſcordium in a pint of red wine mulled with cinnamon, and repeat it every day, and the rhubarb ball once in two or three.

But

But if the diſtemper increaſes, the horſe's flanks and belly look full and diſtended, and he appears griped and in pain, let this glyſter be given, and the quantity of diaſcordium increaſed to an ounce, in his night-drink.

TAKE camomile flowers one handful, red roſes half a handful, pomegranate and balauſtines, of each an ounce; boil in two quarts of water to one, ſtrain off and diſſolve in it two or three ounces of diaſcordium, and one of mithridate; to which may be added a pint of Port wine. Repeat it once a day. A reſtringent glyſter.

If the flux continues violent, give an ounce of roach-alum, with an ounce and a half of bole, twice a day: or diſſolve double this quantity with two ounces of diaſcordium, and the cordial ball in two quarts of hartſhorn drink; to which may be added a pint of Port; and give the horſe three or four times a day a pint of this drink. For this purpoſe alſo a ſtrong decoction of oak bark may be given, with either of the above remedies, and to the ſame quantity; even Various reſtringent drinks.

by itſelf, it will be found on trial no inconſiderable remedy.

Particular ſymptoms.

When the diſcharge is attended with an acrid mucus or ſlime, the griping and pains are very ſevere; the common lining of the bowels being waſhed away; in this caſe the following glyſter ſhould frequently be injected warm.

TAKE of tripe-liquor or thin ſtarch two quarts, oil of olives half a pint, the yolk of ſix eggs well broke, and two or three ounces of coarſe ſugar.

The ſigns of indigeſtion.

Some horſes having naturally weak ſtomachs and bowels, throw out their aliment indigeſted, their dung is habitually ſoft, and of a pale colour, they feed poorly, and get no fleſh: to remedy this complaint, give the following purge two or three times, and then the infuſion to the quantity of a pint every morning.

The ſtomach purge.

TAKE Succotrine aloes ſix drams, rhubarb powdered three drams, myrrh and ſaffron each a dram: make into a ball with ſyrup of ginger.

TAKE

TAKE zedoary, gentian, Winter's bark, and orange peel, of each two ounces; pomegranate bark and balauſtine, of each an ounce; camomile flowers and centaury, each a handful; cinnamon and cloves, each an ounce: infuſe in a gallon of Port or ſtrong beer. The ſtomach drink.

The bloody flux is a diſtemper horſes are not very ſubject to; however, as it ſometimes does occur, whenever blood is diſcharged, attended with gripings, and great pain in bowels, if the flux is not ſpeedily reſtrained, the horſe probably may ſoon be loſt; we recommend therefore the following glyſter and drink for that purpoſe. The bloody flux deſcribed.

TAKE oak bark four ounces, tormentil root two ounces, burnt hartſhorn three ounces; boil in three quarts of forge-water to two: ſtrain off, and add two ounces of diaſcordium, four ounces of ſtarch, and half a dram of opium. A reſtringent glyſter.

A glyſter may alſo be prepared with the ſame quantity of fat broth, ſtarch, and opium, in order to plaiſter over the

coats of the bowels, and abate their violent irritations. Alſo,

A re-ſtringing drink.

TAKE ſoft chalk two ounces, mithridate or diaſcordium one ounce, powder of Indian root half a dram, liquid laudanum fifty or ſixty drops; diſſolve in a pint of hartſhorn drink, and add to it four ounces of cinnamon water, or red wine. Give it twice a day.

Gum Arabic diſſolved in hartſhorn drink, or in common water, ſhould be the horſe's uſual drink.

A neceſſary obſervation.

It may neceſſary in this place to obſerve, that thoſe ſcourings that ſucceed long continued ſickneſſes, ſuch as farcies, putrid fevers, or an inflamed ſtate of blood, where proper bleedings have been neglected, in general end fatally; eſpecially if the diſcharge is a fœtid ſlime, of a dirty brown colour like brine; and the ſame matter runs from their noſes; for in ſuch caſes the texture of the blood is diſſolved, and the whole maſs of fluids is become putrid, and runs off through theſe outlets: and as they reſemble the colliquative diarrhœas that terminate conſumptive caſes in the human body,

body, ſo like them alſo are they incurable.

When horſes are apt to be coſtive, from whatever cauſe it ariſes, gentle openers ſhould be given, ſuch as cream of tartar, Glauber ſalts, and lenitive electuary: four ounces of any two of theſe diſſolved in warm ale, whey, or water, given every other morning for two or three times will anſwer this purpoſe; eſpecially if aſſiſted by an oily emollient glyſter, prepared with a handful of ſalt: ſcalded bran, or barley, with an ounce of fenugreek, and linſeed, occaſionally given, will prevent this complaint. But where it is conſtitutional, and proceeds from the power and force of digeſtion in the ſtomach and guts, as it ſometimes happens, and the horſe is otherwiſe in perfect health, no inconvenience will ariſe from it; and it is obſerved that ſuch horſes are able to endure great fatigue and labour. Remedies for coſtiveneſs in horſes. Obſervation.

CHAP. XV.

Of WORMS *and* BOTS.

The different kinds of worms described.

AUTHORS have described three different sorts of worms that affect horses, *viz.* Bots, which young horses are often troubled with in the spring: the *Rotundi*, or those resembling earth-worms; and the *Ascarides*, or those about the size of the largest sewing-needle, with flat heads.

Bots in the stomachs of horses described.

The bots which breed in the stomachs of horses, and are sometimes the cause of convulsions, appear to be very large maggots, composed of circular rings, with little sharp prickly feet along the sides of their bellies (like the feet of hog-lice) which by their sharpness (like the points of the finest needles) seem to be of use to fasten them to the part where they breed and draw their nourishment, and to prevent their being loosened from such adhesion, before they come to maturity. The eggs from whence these bots are produced, are dispersed into clusters all round the lower orifice of the stomach, and are laid under the inner coat,

coat, or thin membrane of the ſtomach; ſo that when the animals come to form and life, they burſt through this inner coat with their breech and tail ſtrait outwards, and their trunks ſo fixed into the muſcular, or fleſhy coat of the ſtomach, that it ſometimes requires a good pull to diſengage them; from the blood of this laſt coat they draw their nouriſhment, which they ſuck like ſo many leeches, every one ulcerating and purſing up the part, where it fixes like a honey-comb: and they often make ſuch quick havock, as to deſtroy the horſe.

The ſymptoms of worms are various. The bots that many horſes are troubled with in the beginning of the ſummer, are always ſeen ſticking on the ſtrait gut, and are often thruſt out with the dung, with a yellowiſh-coloured matter like melted ſulphur; they are no ways dangerous there, but are apt to make a horſe reſtleſs and uneaſy, and rub his breech againſt the poſts. The ſeaſon of their coming is uſually in the months of May and June, after which they are ſeldom to be ſeen, and rarely continue in any one horſe above a fortnight or three weeks. Thoſe that take their lodgment in the ſtomach, are extremely dangerous, by cauſing con- The ſigns of worms.

vulſions; and are ſeldom diſcovered by any previous ſigns before they come to life, when they throw a horſe into violent agonies. *Vide* Convulſions. The other kinds are more troubleſome than dangerous; but are known by the following ſigns. The horſe looks lean and jaded, his hair ſtares as if he was ſurfeited, and nothing he eats makes him thrive; he often ſtrikes his hind feet againſt his belly, is ſometimes griped, but without the violent ſymptoms that attend a cholic or ſtrangury; for he never rolls and tumbles, but only ſhews uneaſineſs, and generally lays himſelf down quietly on his belly for a little while, and then gets up and falls a feeding: but the ſureſt ſign is when he voids them with his dung.

The cure of bots.

For the cure of bots in the ſtomach, we have already taken notice that calomel ſhould firſt be given in large quantities, and repeated at proper intervals; *vide* p. 88: Æthiop's mineral, or ſome of the under-mentioned forms, may be given afterwards.

But bots in the ſtrait gut may be cured by giving the horſe a ſpoonful of ſavin cut very ſmall, once or twice a day in his oats or bran moiſtened; and three

or

or four cloves of garlic may be added to advantage. Give alſo an aloetic purge between whiles. The following ſtands recommended.

A purge for worms.

TAKE fine Succotrine aloes, ten drams; freſh jalap, one dram; ariſtochia, or birthwort and myrrh powdered, of each two drams; oil of ſavin and amber, of each one dram; ſyrup of buckthorn enough to form into a ball.

The general cure of worms.

But as the ſource of worms in general proceeds from a vitiated appetite and a weak digeſtion, recourſe muſt firſt be had to mercurials, and afterwards to ſuch things as are proper to ſtrengthen the ſtomach, promote digeſtion, and by deſtroying the ſuppoſed ova, prevent the regeneration of theſe animals. Thus, two drams of calomel may be given with half an ounce of diapente, and mixed up with conſerve of wormwood over-night; and the next morning the above purge: theſe may be repeated in ſix or eight days. Or the following mercurial purge may be given, which will be leſs troubleſome, and no leſs efficacious.

Mercurial purges proper.

TAKE

A mercurial.

TAKE crude quickſilver, two drams; Venice turpentine, half an ounce; rub the quickſilver till no gliſtening appears: then add an ounce of aloes, a dram of grated ginger, thirty drops of oil of ſavin, and a ſufficient quantity of ſyrup of buckthorn to make a ball.

One of theſe balls may be given every ſix days, with the uſual precautions in regard to mercurial phyſick; and theſe powders intermediately.

A worm-powder.

TAKE powdered tin and Æthiop's mineral, of each half an ounce; give every night in a maſh, or his corn.

Various worm medicines recommended.

The various preparations of antimony and mercury muſt be given ſeveral weeks together, in order to get entire riddance of theſe vermin. The Æthiop's mineral may be given to the quantity of half an ounce a day; the mercurius alkaliſatus to two drams a day, incorporated with a bit of cordial ball. The cinnabar powders, as directed in the farcy, are no leſs effectual: and when worms are bred from high feeding, or unwholeſome food,

food, rue, garlick, tanſy, ſavin, box, and many other ſimples, may be given ſucceſsfully, being for that purpoſe mixed with their food; as alſo, cut tobacco, from half an ounce to an ounce a day.

A bad digeſtion the cauſe.

As the generation of worms perhaps principally proceeds from a weak ſtomach, and bad digeſtion, if the horſe be of a tender conſtitution, and a bad feeder, the following bitter drink ſhould be given to ſtrengthen his ſtomach, and mend his digeſtion; which will prevent the formation of theſe animals, interpoſing now and then a gentle ſtomach purge, prepared with an ounce and half of hiera picra made up into a ball, with ſyrup of buckthorn.

A ſtomach drink.

TAKE gentian root, zedoary, and galangals, of each two ounces; camomile flowers, and tops of centaury, of each two handfuls; Jeſuit's bark powdered, two ounces; filings of iron half a pound; juniper-berries four ounces: infuſe in three gallons of ale for a week, ſhaking the veſſel now and then; and give a pint of this night and morning.

To

To anſwer this purpoſe alſo, an ounce of filings of ſteel, finely powdered, has been ſucceſsfully given every day for a fortnight, or longer, in the horſe's corn.

CHAP. XVI.

Of the YELLOWS, *or* JAUNDICE.

The ſymptoms of the jaundice deſcribed.

HORSES are frequently ſubject to this diſtemper: which is known by a duſky yellowneſs of the eyes; the inſide of the mouth and lips, the tongue and bars of the roof of the mouth, looking alſo yellow. The horſe is dull, and refuſes all manner of food; the fever is ſlow, yet both that and the yellowneſs increaſe together. The dung is often hard and dry, of a pale yellow, or light pale green. His urine is commonly of a dark dirty brown colour, and when it has ſettled ſome time on the pavement, it looks red like blood. He ſtales with ſome pain and difficulty; and if the diſtemper

temper is not checked ſoon, grows delirious and frantick. The off ſide of the belly is ſometimes hard and diſtended; and in old horſes, when the liver has been long diſeaſed, the cure is ſcarce practicable, and ends fatally with a waſting diarrhœa: but when the diſtemper is recent, and in young horſes, there is no fear of a recovery, if the following directions are obſerved.

The cure.

Firſt of all bleed plentifully; and give the laxative glyſter, p. 34. as horſes are apt to be very coſtive in this diſtemper; and the next day give him this purge.

A purge for the jaundice.

TAKE of Indian rhubarb, powdered, one ounce and a half; ſaffron, two drams; Succotrine aloes ſix drams; ſyrup of buckthorn a ſufficient quantity.

If the rhubarb ſhould be found too expenſive, omit it, and add the ſame quantity of cream of tartar, and half an ounce of Caſtile ſoap, with four drams more of aloes. This may be repeated two or three times, giving intermediately the following balls and drink.

TAKE

Theopening ball.

TAKE of Æthiop's mineral, half an ounce; millepedes the same quantity; Castile soap, one ounce; make into a ball, and give one every day, and wash it down with a pint of this decoction.

Theopening drink.

TAKE madder root and turmerick, of each four ounces; burdock root sliced, half a pound; Monk's rhubarb, four ounces; liquorice sliced two ounces: boil in a gallon of forge-water to three quarts; strain off, and sweeten with honey.

Balls of Castile soap and turmerick, may be given also for this purpose, to the quantity of three or four ounces a day; and will in most recent cases succeed.

Mercurials sometimes necessary.

By these means the distemper generally abates in a week; which may be discovered by an alteration in the horse's eyes and mouth; but the medicines must be continued till the yellowness is entirely removed. Should the distemper prove obstinate, and not submit to this treatment, you must try more potent remedies, *viz.* mercurial physick repeated two

two or three times at proper intervals; and then the following balls.

TAKE ſalt of tartar two ounces, cinnabar of antimony four ounces, live millepedes and filings of ſteel, of each three ounces: ſaffron half an ounce, Caſtile or Venice ſoap half a pound: make into balls the ſize of a pullet's egg with honey, and give one, night and morning, with a pint of the above drink. Alterative balls for the jaundice.

It will be proper on his recovery to give two or three mild purges, and if a full fat horſe, to put in a rowel.

CHAP. XVII.

Of the Diſorders of the Kidneys *and* Bladder.

THE ſigns of the *kidneys* being hurt or affected, are a weakneſs of the back and loins, difficulty of ſtaling, faintneſs, loſs of appetite, and deadneſs in the eyes; the urine is thick, foul, and ſometimes The ſymptoms of hurts in the kidneys.

ſometimes bloody, eſpecially after a violent ſtrain. A horſe diſeaſed in his kidneys can ſeldom back, that is, move ſtraight backwards, without pain, which is viſible as ſoon as he is put to the trial: the ſame thing is obſervable indeed in horſes, whoſe backs have been wrang and wrenched, but with this difference, that in the latter there is ſeldom any defect or alteration in the urine, except that it is higher coloured.

The remedy.

Bleeding is the prime remedy, and that plentifully, in order to prevent inflammation, and the more ſo, if a fever attends a difficulty in ſtaling, for then we may ſuſpect the kidneys already inflamed. A rowel in the belly has been found uſeful, and the following balls may be given twice or thrice a day, with a pint of marſh-mallow decoction, in which half an ounce of gum Arabic is diſſolved, with an ounce of honey.

A ſtrengthning ball.

TAKE Lucatelli's balſam one ounce, ſperma ceti ſix drams, ſal prunellæ half an ounce; mix into a ball with honey: if the urine is bloody, add half an ounce of Japan earth.

Should

Should the fever continue, bleed largely, give emollient glyſters, and the cooling opening drink, p. 32. till it abates.

If the urine paſſes with difficulty and pain, notwithſtanding theſe means, give this ball, and repeat it twice or thrice a day, till the horſe ſtales freer and without pain, his urine becomes of a right conſiſtence, and is free from any purulent ſettlement.

TAKE balſam of Copivi, or Straſburgh turpentine, and Venice ſoap, of each one ounce; nitre ſix drams, myrrh powdered two drams; make into a ball with honey, and waſh it down with the marſh-mallow decoction. A diuretic ball.

But if this method ſhould not be ſucceſsful, and the urine continues turbid, grows coffee-coloured or fœtid, the horſe loſing his appetite and fleſh; it is a ſure ſign of ulceration in the kidney; which if the above remedies do not ſoon remove, you may depend on it the horſe will go into a conſumption, and is incurable. Obſervation.

The cauſes of ſuppreſſion of urine.

As a ſuppreſſion of urine ariſes ſometimes from an inflammation of the kidney; ſo at others, from a paralytic diſorder, diſabling them in their office of ſeparating the urine from the blood; in this latter caſe the bladder is uſually empty, ſo that a horſe will make no motions to ſtale, and if he continues a few days in this condition, his body will ſwell to a great degree, breaking out in blotches all over, and death will ſoon cloſe the ſcene.

The cure.

If it ariſes from inflammation, bleed largely, and treat the horſe as above recommended; but if not, give ſtimulating glyſters, and ſtrong diuretics, ſuch as the following balls, once in four hours; for if a horſe ſtales not in thirty hours, his danger muſt be great.

A ſtimulating diuretic ball.

TAKE juniper-berries powdered one ounce, ſal prunellæ ſix drams, ethereal oil of turpentine half an ounce, camphor one dram, oil of juniper two drams; make into a ball with honey, and give after it three or four horns of the marſh-mallow decoction and honey.

Or,

Or,

TAKE ſquills powdered two or three drams, nitre half an ounce, or ſix drams; make into a ball with honey. Another.

Or,

The following, which is more forcing, and ſhould be given with caution.

TAKE cantharides well dried, from one ſcruple to half a dram; camphor diſſolved in oil of almonds, from one dram to two; nitre and Venice ſoap, of each an ounce; mix into a ball with ſyrup of marſh-mallows. Another ball more ſtimulating.

When this laſt ball is given, the horſe ſhould be made to drink plenty of water, with gum Arabic diſſolved in it; the following glyſter may alſo be given at the ſame time.

TAKE of Barbadoes aloes two ounces; the ſame quantity of Venice turpentine, beat up with the yolks of two eggs: jalap powdered two drams; juniper and bay-berries, each a handful, bruiſed and boiled A ſtimulating glyſter.

in two quarts of a decoction of mallows; ſtrain off, and mix by degrees with the above, to which add a pint of linſeed oil.

An embrocation and ſtimulating poultice.

If the complaint is not removed by theſe means, rub the horſes reins well with two parts of oil of turpentine, and one of oil of amber; and apply a poultice of garlick, horſe-radiſh, muſtard-ſeed, camphor, and green ſoap, ſpread on thick cloth, over them. Give the horſe alſo two drams of calomel over night, and a moderate purge the next morning. Theſe, perhaps, are the chief and beſt remedies that can be given in this generally fatal diſorder.

The ſtrangury how to be treated.

When the *ſtrangury* in a horſe does not ariſe from wind, or dung preſſing on the neck of the bladder (as was obſerved in the chapter on cholick) the cauſe is from inflammation, or too long a retention of the urine. Such horſes make frequent motions to ſtale, ſtand wide and ſtraddling, are full, and have their flanks diſtended. In this caſe bleed largely; give the following drink, and repeat it every two hours, for two or three times, till the horſe is relieved.

TAKE

TAKE Venice turpentine broke with the yolk of an egg one ounce, nitre or ſal prunellæ ſix drams, half a pint of ſweet oil, and a pint of white wine. A drink for the ſtrangury.

If this drink ſhould not have the deſired effect, the diuretic ball above mentioned may be given in the ſame manner, omitting the myrrh.

Give the horſe plenty of the marſh-mallow decoction; in a quart of which diſſolve an ounce of nitre and gum Arabic, and two of honey.

Horſes ſubject to a *diabetes*, or profuſe ſtaling, if old, or of weak conſtitution, are ſeldom cured; they ſoon loſe their fleſh and appetite, grow feeble, their coat ſtaring, and they die rotten. Of a young horſe there are more hopes; but he muſt not be indulged with too much water, or moiſt food. Give him the following: Adiabetes how treated.

TAKE Jeſuit's bark four ounces, biſtort and tormentil root of each two ounces; boil in two gallons of lime-water to the conſumption of A drink for a diabetes.

half, and give a pint three times a day.

Others for that purpoſe.

Let the horſe drink two or three quarts a day of lime-water; and if theſe medicines ſhould not ſucceed, give a quart of ſtrong alum poſſet, three or four times a day.

This method is proper alſo for a horſe who ſtales blood; or the following balls may be given for that purpoſe, if the bleeding is profuſe.

Balls for piſſing blood.

TAKE bole armoniac one ounce, Japan earth half an ounce, roach-allum two drams, elixir of vitriol one dram; make into a ball with conſerve of roſes, and give it every ſix hours.

As this diſorder generally proceeds from too violent exerciſe, over-ſtraining, *&c.* repeated bleedings in ſmall quantities are abſolutely neceſſary, till the mouths of the veſſels cloſe up.

CHAP.

CHAP. XVIII.

Of MOLTEN-GREASE.

BY molten-greaſe is meant a fat or oily diſcharge with the dung, and ariſes from a colliquation or melting down of the fat of the horſe's body, by violent exerciſe in very hot weather. It is always attended with a fever, heat, reſtleſſneſs, ſtarting, and tremblings, great inward ſickneſs, ſhortneſs of breath, and ſometimes with the ſymptoms of a pleuriſy. His dung will be extremely greaſy, and he will fall into a ſcouring; his blood will have a thick ſkin or fat over it when cold, of a white or yellow hue, but chiefly the latter; the congealed part, or ſediment, is commonly a mixture of ſize and greaſe, which makes it ſo extremely ſlippery, that it will not adhere to the fingers, and the ſmall portion of ſerum feels alſo ſlippery and clammy. The horſe ſoon loſes his fleſh and fat, which probably is diſſolved and abſorbed into the blood: and thoſe that ſurvive this ſhock, commonly grow hide-bound for a time, their legs ſwelling

Molten-greaſe what.

The ſymptoms.

both before and behind, and continue in this ſtate till the blood and juices are rectified; and if this is not done effectually, the farcy, or ſome obſtinate ſurfeit, generally follows, very difficult to remove.

The cure. In the firſt place bleed plentifully, and repeat it for two or three days ſucceſſively in ſmaller quantities; two or three rowels ſhould alſo be immediately put in, and the cooling emollient glyſters, p. 34. daily thrown up to abate the fever, and drain off the greaſy matter from the inteſtines. By the mouth give plenty of warm water, or gruel, with cream of tartar, or nitre, to dilute and attenuate the blood; which in this caſe is greatly diſpoſed to run into grumes, and endanger a total ſtagnation.

Purging when neceſſary. When the fever is quite gone off, and the horſe has recovered his appetite, gentle aloetic purges ſhould be given once a week, for a month or ſix weeks, in order to bring down the ſwelled legs; but if the purgative ingredient does not exceed half an ounce, or ſix drams of fine aloes, it only opens the belly gently; and, with the other medicines joined with it, paſſes into the blood, acts as an alterative, and operates

operates both by urine and perſpiration; as will appear by the horſe's ſtaling plentifully, and the kindly feel of his ſkin. To this end give the following, which, repeated for ſome time, will entirely remove this diſorder.

An alterative purge.

TAKE of Succotrine aloes ſix drams, of gum guaiacum powdered half an ounce, of diaphoretic antimony, and powder of myrrh, of each two drams: make into a ball with ſyrup of buckthorn.

Or, it may be prepared with an ounce of aloes, ſix drams of diapente, and a ſpoonful of oil of amber.

Theſe will ſeldom take a horſe from his buſineſs above two or three days in a week; neither will he loſe his fleſh or appetite with them; but, on the contrary, mend in both: which cannot be obtained by any other method of purging; and gives this greatly the preference in many caſes.

Alterative balls.

Two ounces of nitre mixed up into a ball with honey, and a dram of camphor, will alſo be found an excellent medicine for this purpoſe, as it will powerfully attenuate the blood, and promote the due

due ſecretions; to which end it ſhould be given every day for a fortnight, or three weeks.

CHAP. XIX.

Of Surfeits, Mange, *and* Hide-Bound.

SUrfeits ariſe from various cauſes: but are commonly the effects of ſome diſeaſes not attended to, or that have been ill cured.

Surfeits deſcribed.

A horſe is ſaid to be ſurfeited, when his coat ſtares, and looks ruſty and dirty, though proper means has not been wanting to keep him clean. The ſkin is full of ſcales and dander, that lays thick and mealy among the hair, and is conſtantly ſupplied with a freſh ſucceſſion of the ſame, for want of due tranſpiration. Some horſes have hurdles of various ſizes, like peas or tares; ſome have dry fixed ſcabs all over their limbs and bodies: others a moiſture, attended with heat and inflammation; the humours being ſo ſharp,

ſharp, and violently itching, that the horſes rub ſo inceſſantly, as to make themſelves raw. Some have no eruptions at all, but an unwholeſome look, and are dull, ſluggiſh, and lazy; ſome appear only lean and hide-bound; others have flying pains and lameneſs, reſembling a rheumatiſm: ſo that in the ſurfeits of horſes, we have almoſt all the different ſpecies of the ſcurvy and other chronical diſtempers.

The following method is uſually attended with ſucceſs in the dry ſpecies. Firſt take away about three or four pounds of blood; and then give the following mild purge, which will work as an alterative, and ſhould be repeated once a week, or ten days, for ſome time. The cure.

TAKE Succotrine aloes ſix drams, or one ounce; gum guaiacum half an ounce; diaphoretic antimony, and powder of myrrh, of each two drams: make into a ball with ſyrup of buckthorn. An alterative purge.

In the intermediate days, an ounce of the following powder ſhould be given, morning and evening in his feeds.

TAKE

The alterative powders.

TAKE native cinnabar, or cinnabar of antimony, finely powdered, half a pound; crude antimony, in fine powder, four ounces; gum guaiacum alſo in powder, four ounces: make into ſixteen doſes for eight days.

This medicine muſt be repeated till the horſe coats well, and all the ſymptoms of ſurfeit diſappear. If the horſe is of ſmall value, two or three common purges ſhould be given, and half an ounce of antimony, with the ſame qauntity of ſulphur, twice a day, or the alterative balls with camphor and nitre, as directed in the preceding chapter.

If the little ſcabs on the ſkin do not peel off, anoint them with the mercurial ointment; during the time of uſing which, it will be proper to keep the horſe dry, and to give him warm water. This ointment properly rubbed into the blood, with the aſſiſtance of purging phyſick, has frequently cured theſe kind of ſurfeits, without any other aſſiſtance.

The

The wet ſurfeit, which is no more than a moiſt running ſcurvy, appears on different parts of the body of a horſe, attended ſometimes with great heat and inflammation; the neck oftentimes ſwells ſo in one night's time, that great quantities of a hot briny humour iſſues forth, which, if not allayed, will be apt to collect on the poll or whithers, and produce the poll-evil or fiſtula. This diſeaſe alſo frequently attacks the limbs, where it proves obſtinate, and hard to cure; and in ſome horſes ſhews itſelf ſpring and fall. The moiſt ſurfeit deſcribed.

In this caſe bleed plentifully, avoid externally all repellers, and give cooling phyſick twice a week; as, four ounces of lenitive electuary, with the ſame quantity of cream of tartar; or the latter, with four ounces of Glauber ſalts, quickened, if thought proper, with two or three drams of powder of jalap, diſſolved in water-gruel, and given in a morning faſting. The cure.

After three or four of theſe purges two ounces of nitre made into a ball with honey, may be given every morning for a fort- Nitre recommended.

a fortnight; and, if attended with ſucceſs, repeated for a fortnight longer.

How given.

The powders above-mentioned may alſo be given with the horſe's corn; or a ſtrong decoction of guaiacum ſhavings, or logwood, may be given alone to the quantity of two quarts a day. Theſe, and indeed all alterative medicines, muſt be continued for a long time, where the diſorder proves obſtinate.

Hide-bound, how treated.

The diet ſhould be cool and opening, as ſcalded bran or barley; and if the horſe is hide-bound, an ounce of fenugreek ſeeds ſhould be given in his feeds for a month or longer: and, as this diſorder often proceeds from worms, give the mercurial phyſick too, and afterwards the cinnabar powders, as above directed; but as in general it is not an original diſeaſe, but a ſymptom only of many, in the cure, regard muſt be had to the firſt cauſe: thus, as it is an attendant on ſurfeits, fevers, worms, *&c.* the removal of this complaint muſt be variouſly effected.

The mange deſcribed.

In a mangy horſe the ſkin is generally tawny, thick, and full of wrinkles, eſpecially about the mane, the loins, and tail; and

and the little hair that remains in thoſe parts ſtands almoſt always ſtraight out or briſtly: the ears are commonly naked and without hair, the eye and eyebrows the ſame; and when it affects the limbs, it gives them the ſame aſpect; yet the ſkin is not raw, nor peels off, as in the hot inflamed ſurfeit.

How cured.

Where this diſtemper is caught by infection, if taken in time, it is very eaſily cured: and I would recommend a ſulphur ointment as moſt effectual for that purpoſe, rubbed in every day. To purify and cleanſe the blood, give antimony and ſulphur for ſome weeks after. There are a great variety of external remedies for this purpoſe, ſuch as train-oil and gunpowder, tobacco ſteeped in chamber-lye, &c. Soleyſel recommends the following.

Ointment for the mange.

TAKE burnt alum and borax in fine powder, of each two ounces; white vitriol and verdigreaſe powdered, of each four ounces; put them into a clean pot, with two pounds of honey, ſtirring till they are incorporated; when cold, add two ounces of ſtrong aqua fortis.

But

But when this diſorder is contracted by low feeding, and poverty of blood, the diet muſt be mended, and the horſe properly indulged with hay and corn. The following ointments are effectually uſed for this diſorder, rubbed into the parts affected every day.

Ointments for the mange.

TAKE powdered brimſtone, train-oil, and tar, of each equal quantities; to which may be added ginger, or white hellebore.

Or,

TAKE ſulphur vivum half a pound, crude ſal Armoniac one ounce, hogs-lard, or oil, a ſufficient quantity to form into an ointment.

Or,

TAKE quickſilver, and oil of vitriol, of each one ounce; hogs-lard one pound, ſulphur vivum four ounces, oil of turpentine one ounce and half.

Theſe are both very powerful remedies for this diſorder, and can ſcarce fail of ſucceſs.

To the two firſt, occaſionally, may be added a third part of mercurial ointment; but as ſulpher is in general allowed to be the ſpecific in the itch, and being found both more ſafe and efficacious than mercury, ſo we apprehend it will ſufficiently anſwer the purpoſe here; for as this diſorder ſeems beſt accounted for by Lewenhoeck, from certain ſmall inſects he diſcovered in the puſtules by the microſcope; ſo it ſeems as if they were deſtroyed by the ſteams of brimſtone, though only raiſed by the heat of the body; for in the human body, the itch may be cured by partial ſulphureous unctions on the legs only; but where the mange proves obſtinate in horſes, let the parts be waſhed with the ſublimate water in Chap. xxv. before the application of the ointment, and ſubjoin the internal uſe of ſulphur, in order to diffuſe the ſteams more certainly through the ſkin; there being reaſon to believe, as in the itch, that the animalcula may ſometimes lie too deep, to be thoroughly deſtroyed by external applications only. Obſervation.

CHAP. XVII.

Of the FARCIN *or* FARCY.

The farcy described.

THE true farcy is properly a diſtemper of the blood veſſels, which generally follows the track of the veins, and when inveterate, thickens their coats and integuments, ſo that they become like ſo many cords. I ſhall not deſcribe the different ſorts of farcies, ſeeing they are only degrees of one and the ſame diſtemper; but proceed to paint the diſtemper by its ſymptoms, which are pretty manifeſt to the eye.

The ſymptoms.

At firſt one or more ſmall ſwellings, or round buds like grapes or berries, ſpring out over the veins, and are often exquiſitely painful to the touch; in the beginning they are hard, but ſoon turn into ſoft bliſters, which, when broke, diſcharge an oily or bloody ichor, and turn into very foul and ill-diſpoſed ulcers. In ſome horſes it appears on the head only; in ſome on the external jugular; in others on the plate vein, and runs downwards on the inſide of the fore-arm towards

towards the knee, and very often upwards towards the briſket; in ſome the farcy ſhews itſelf on the hind parts, about the paſterns, and along the large veins on the inſide of the thigh, riſing upwards into the groin and towards the ſheath; and ſometimes the farcy makes its appearance on the flanks, and ſpreads by degrees towards the lower belly, where it often becomes very troubleſome.

When the farcy appears on the head only, it is eaſily cured; eſpecially when it is ſeated in the cheeks and forehead, the blood-veſſels being here ſmall; but it is more difficult when it affects the lips, the noſtrils, the eyes, and kernels under the jaws, and other ſoft and looſe parts, eſpecially if the neck vein becomes corded. When it begins on the outſide of the ſhoulder or hips, the cure is ſeldom difficult; but when the farcy ariſes on the plate vein, and that vein ſwells much, and turns corded, and the glands or kernels under the arm-pit are affected, it is hard to cure; but more ſo when the crural veins within-ſide of the thigh are corded and beſet with buds, which affect the kernels of the groin, and the cavernous body of the yard. When the farcy begins on the paſterns or lower

When moſt favourable.

limbs, it often becomes very uncertain unleſs a timely ſtop is put to it; for the ſwelling in thoſe dependent parts grows ſo exceſſively large in ſome conſtitutions, and the limbs ſo much disfigured thereby with foul ſores and callous ulcerations, that ſuch a horſe is ſeldom fit for any thing afterwards, but the meaneſt drudgery: but it is always a promiſing ſign, wherever the farcy happens to be ſituate, if it ſpreads no further. It is uſual to affect only one ſide at a time, but when it paſſes over to the other, it ſhews great malignancy; when it ariſes on the ſpines, it is then for the moſt part dangerous, and is always more ſo to horſes that are fat and full of blood, than to thoſe that are in a more moderate caſe. When the farcy is epidemical, as ſometimes happens, it riſes on ſeveral parts of the body at once, forms raſty foul ulcers, and makes a profuſe running of greeniſh bloody matter from both noſtrils; and ſoon ends in a miſerable rot.

General ſpecifics of little uſe.

From this deſcription of the farcy, it will appear how greatly thoſe may be diſappointed, who depend on ſome ſingle ſpecific drink or ball for a certain cure; for the ſymptoms are ſometimes ſo favourable, that it is eaſily conquered by a very

very ſimple management; and when it ariſes ſuperficially upon the ſmaller veſſels, it will often go off with moderate labour without any other means than bleeding. Such inſtances as theſe may eaſily give a reputation to things of no great efficacy, and bring them into eſteem; but whoever has acquired any true notion of the farcy, will know that this diſtemper is not to be conquered but by ſuch things as are fitly adapted to the various ſymptoms that occur in the different ſtages of it. To avoid therefore the perplexity that ariſes from the various complications ſo uſual in the farcy, we ſhall conſider it in its different ſtates, or degrees, *viz.* when it ſeizes only the ſmaller veſſels; when the larger veins are corded, and the feet, paſterns, and flanks affected; and laſtly, when the farcy, beginning on one ſide only, breaks out on the other alſo, and affects the whole body.

The firſt ſtage of the farcy.

When the farcy makes its firſt appearance on the head, it riſes on the cheeks and temples, and looks like a network, or ſmall creeping twigs full of berries. Sometimes it inflames the eye, and ſometimes little bliſters or buds run along the ſide of the noſe. It ariſes often

on the outside of the shoulder, running along the small veins with heat and inflammation; and sometimes a few small buds appear near the withers, and on the outside of the hip. In all these appearances, the disease being superficial, and affecting only the smaller vessel, is easily conquered by the following method, when taken in time; for the simplest farcy, if neglected, may degenerate into the worst sort.

Bleeding almost always necessary.

This distemper then being of an inflammatory nature, and in a particular manner affecting the blood-vessels, must necessarily require large bleeding, particularly where the horse happens to be fat and full of blood. This always checks the beginning of a farcy, but is of small service afterwards; and if a horse is low in flesh, the loss of too much blood sometimes proves injurious. After bleeding, let the horse have four ounces of cream of tartar and lenitive electuary; which may be given every other day for a week, to cool the blood, and open the body; and then give nitre three ounces a day, for three weeks, or a month; and anoint the buds and swellings with the following ointment twice a day.

TAKE

TAKE ointment of elder four ounces, oil of turpentine two ounces, ſugar of lead half an ounce, white vitriol powdered two drams; mix together in a gallipot. An ointment for the buds.

The buds ſometimes by this method are diſperſed, leaving only little bald ſpots, which the hair ſoon covers again. When they break and run, if the matter be thick and well digeſted, they will ſoon be well; but in order to confirm the cure, and to diſperſe ſome little lumps which often remain for ſome time on the ſkin without hair, give the liver of antimony for a month; two ounces a day for a fortnight, and then one a day for the other fortnight: by following this method, a farcy which affects only the ſmall veſſels, may be ſtopped in a week or ten days, and ſoon after totally eradicated. Liver of antimony recommended.

When the farcin affects the larger blood veſſels, the cure is more difficult; but let it always be attempted early: therefore, on the plate, thigh or neck veins appearing corded, bleed immediately on the oppoſite ſide, and apply the following to the corded vein. When the larger veins are affected, the cure is more difficult.

A liniment to anoint the corded veins.

TAKE oil of turpentine in a pint bottle ſix ounces; oil of vitriol three ounces; drop the oil of vitriol into the oil of turpentine by little at a time, otherwiſe the bottle will burſt; when it has done ſmoking, drop in more oil of vitriol, and ſo on till all is mixed.

This mixture is one of the beſt univerſals in a beginning farcy; but where it is ſeated in looſe fleſhy parts, as the flanks or belly, equal parts of the oil of vitriol and turpentine are neceſſary.

How uſed.

Rub the parts firſt with a woollen cloth, and then apply ſome of the mixture over the buds, and wherever there is any ſwelling, twice a day. Give the cooling phyſick every other day, and then three ounces of nitre every day for ſome time. This method muſt be continued till the buds digeſt, and the cord diſſolves; and when the ſores run plentifully, the matter digeſts well, and the lips and edges are no ways thick or callous, may expect a ſpeedy recovery; yet to confirm the cure, and prevent a relapſe, give the liver of antimony, or crude antimony, as above directed; and to

to heal the ſores and ſmooth the ſkin, dreſs with bees-wax and oil.

When the farcy begins on the flanks, or towards the lower belly, it often takes its riſe from a ſingle puncture of a ſharp ſpur. The pain and ſmarting is one ſure ſign to diſtinguiſh the farcy from common accidents: the ſtaring of the hair, which ſtands up like a tuft all round the buds or bliſters, and the matter that iſſues from the buds, which is always purulent and of a clammy, greaſy conſiſtence, are other certain ſigns. After bathing with the mixture above-mentioned till the ulcers are ſmooth and healing, ſhould the ſwelling not ſubſide, to prevent the ſpreading of the buds, and to diſperſe them, bathe with either of theſe mixtures as far as the center of the belly; and at the ſame time give a courſe of antimonials, as will preſently be preſcribed.

The farcy on the flanks difficult of cure.

TAKE ſpirits of wine four ounces; oil of vitriol and turpentine, of each two ounces; white wine vinegar or verjuice, ſix ounces.

Diſcutient and repelling waſhes.

Or,

Or the following:

TAKE ſpirits of wine rectified four ounces, camphor half an ounce, vinegar or verjuice ſix ounces, white vitriol diſſolved in four ounces of ſpring water, one ounce; mix together.

The farcy how diſtinguiſhed from the greaſe.

In the lower limbs the farcy lies, ſometimes concealed for a great while, and makes ſo ſlow a progreſs, that it is often miſtaken for greaſe, or for a blow or kick, and goes by the general appellation of an humour ſettled there. In order to diſtinguiſh the one from the other, we ſhall obſerve, that a kick or bruiſe is generally attended with a ſudden ſwelling, or a contuſed wound, which for the moſt part digeſts eaſily: the greaſe is alſo a ſmooth ſwelling that breaks out above the bending of the paſterns backwards; but the farcy begins on the paſtern joint uſually with one bud, and runs upwards like a knotty crab-tree.

The general method of cure.

Very ſimple means has ſometimes ſtopped it, before it has begun to ſpread; a poultice with bran and verjuice bound round the part, and renewed once a day, will often alone ſucceed; and if proud

fleſh

fleſh ſhould ariſe, touch it with oil of vitriol, or aqua fortis, an hour before you apply the poultice; for when the diſtemper is local, as we ſuppoſe it here, it is to be conquered by outward applications.

When the diſtemper grows inveterate, and reſiſts the obove method, and the veſſels continue corded, Gibſon recommends the following mixture.

A mixture for an inveterate farcy.

TAKE linſeed oil, half a pint; oil of turpentine and petre, of each three ounces; tincture of euphorbium and hellebore, of each two drams: the ſoldier's ointment, two ounces, or oil of bays; oil of origanum, half an ounce; double aqua fortis, half an ounce; after the ebullition is over, add two ounces of Barbadoes tar.

How the buds ſhould be dreſſed.

Rub this into the corded veins, and wherever there is a ſwelling, once in two or three days; but if the orifices are choaked up with proud fleſh, or the ſkin ſo much thickened over the ulcers as to confine the matter, in either caſe it is neceſſary to make an open paſſage with a ſmall hot iron, and deſtroy the

proud flesh, after which it may be kept down by touching with oil of vitriol, aqua fortis, or butter of antimony. A salve may also be prepared with quick-silver and aqua fortis, rubbing any quantity of the former with enough of the latter to the consistence of a liniment; smear the ulcers with this whenever they appear foul, and you will find it preferable to most other eating medicines.

Cautions in regard to the use of sublimate.

Our farriers, after opening the buds, put in usually a small quantity of corrosive sublimate or arsenick, which they call coring out the farcy: this may answer where the buds are few, and not situated near large blood-vessels, joints, or tendons; others use roman vitriol, or sublimate and vitriol, in equal quantities; but let it be remembered, that many a horse has been poisoned by these medicines ignorantly used, and in too large quantities; which should be a caution to huntsmen not to suffer their hounds to feed on the carcases of farcied horses, as the greatest part of a pack have been poisoned by that means.

Very desperate methods used in

I shall now mention some of the desperate methods, and more violent kinds of medicines given by some internally:

thus, from four to eight ounces of lapis calaminaris, to which two ounces of tutty finely powdered is added, with other metallic ſubſtances, have been given. Some give a pound of barrel ſoap boiled in ſtale beer, with ſavin, rue, and other herbs of that intention. Others go yet further, being determined to kill or cure, by giving drinks prepared with green vitriol, roach-allum, Roman vitriol, oil of vitriol boiled in chamber-lye, with hemp-ſeed, hemlock and common ſalt. Thoſe who uſe nothing but the decoctions or juices of herbs, ſuch as wormwood, rue, or elder particularly, ſtand a much better chance for a cure, if given in time; but when the diſtemper is grown inveterate, nothing comes in competition with mercurial and antimonial medicines. the cure of the farcy.

The following balls are proper in every ſtate of the farcy, and when the diſtemper has been in its infancy, before the ſkin was much defaced, has often cured it in a week or two, by giving them only once or twice a day: but in an old farcy they ſhould be given for two or three months together.

TAKE

The alterative balls.

TAKE of native cinnabar, or cinnabar of antimony, eight ounces; long birthwort and gum guaiacum powdered of each four ounces; make into a paſte with honey, and form into balls of the ſize of a large walnut, and roll them in liquorice powder.

Mercurials generally ſucceſsful, when given with ſkill.

The tedioufneſs of this courſe has encouraged the giving of mercurials, and indeed where they are directed with ſkill, they muſt be attended with ſucceſs; the ſtronger preparations, as the red and white precipitates, and turbith, being combined with ſharp ſaline parts, may be hazardous aud injurious; but the latter given in ſmall quantities have been found very ſucceſsful in ſuch kind of inveterate diſorders. Mr. Gibſon ſays, he has given it to a dram at a doſe, where the limbs have been greatly ſwelled; that in forty-eight hours the ſores were all dried up, and the limbs reduced: but that it made the horſe ſo violently ſick for ſeveral days, and ſcoured him to ſuch a degree, that it could not be repeated.

Turbith ſhould be given in ſmall

One would have thought that the ſucceſs attending this medicine ſo ſuddenly, might have encouraged Gibſon to have made

made further trials in ſmaller quantities, which had he done, it is more than probable he would not have been diſappointed: for the grand ſecret in giving mercurials as alteratives, is the introducing them into the blood, without operating on the ſtomach and bowels; and to do this effectually, they muſt be given in ſmall quantities, and ſo bridled, as to controul their force on the firſt paſſages: taken in this manner, they will mix gradually with the blood and juices, and operate both effectually and ſafely. quantities at a time.

The method I would recommend is as follows: give one ſcruple or half a dram of turbith, mixed into a ball with an ounce of Venice ſoap, every other night for a fortnight; then abſtain a week or ten days, and repeat it again. Should this ball purge, or make the horſe ſick, mix it up with two drams of philonium, or with four or five grains of opium, or camphor; with theſe reſtrictions it may be given for ſome weeks; but ſhould the horſe's mouth be found tender or ſore, you muſt refrain giving, till that complaint is removed by gentle purges; and then return to it again in ſmaller quantities; for as the effects of mercurials are very different in the different conſtitutions, Balls with turbith recommended.

tutions, both of horſes as well as men; ſo the quantity muſt be varied, in proportion to the operation, which is not intended here to be ſenſible, but to work imperceptibly on the blood and juices, correcting them as a powerful alterative: during the whole courſe, particular care ſhould be taken that he gets no cold. *Vide* Chapter on ALTERATIVES.

An alterative mercurial ball.

Two ounces of quickſilver divided with an ounce of turpentine, and made up into four balls, with diapente and gum guaiacum of each two ounces, and a ſufficient quantity of honey, have for this purpoſe been ſucceſsfully given, one ball twice a week; but gentle purgatives ſhould be interpoſed, to prevent a ſalivation, which ſome horſes are very prone to, on taking mercurials, though in ſmall quantities.

Dr. Bracken recommends the knots and cords to be rubbed with the mercurial ointment before they break, in order to diſperſe them, and after breaking, to dreſs the ſores with equal parts of Venice turpentine and quickſilver: if by theſe means the mouth ſhould become ſore, treat as above.---This method ſeems to be effectual with proper care.

The

The following is alſo recommended by the ſame gentleman.

TAKE butter of antimony and bezoar mineral, of each one ounce; beat up with half a pound of cordial ball, and give the bigneſs of a walnut, or three quarters of an ounce, every day for two or three weeks, faſting two or three hours after it. An alterative ball.

As moſt preparations from antimony are of uſe in the farcy, ſo from two drams of antihecticum Poterii to half an ounce, may be given with a bit of cordial ball, every other day, for ſome time; for in theſe obſtinate caſes the very craſis of the blood muſt be altered, which can only be effected by degrees, and of courſe is a work of time.

We ſhall here take notice of what is called the water farcy, which has no reſemblance to a true farcy, either in its cauſe, ſymptoms, or effects, but has only obtained this name through cuſtom and ignorance. The water farcy, or dropſy.

This water farcy then is of two kinds; one the product of a feveriſh diſpoſition, The dropſy of two kinds.

terminating on the ſkin, as often happens in epidemical colds; the other is dropſical, where the water is not confined to the belly and limbs, but ſhews itſelf in ſeveral parts of the body, by ſoft ſwellings, yielding to the preſſure of the finger. This laſt kind uſually proceeds from foul feeding, or from the latter graſs and fog, that often comes up in great plenty with continual cold rains, and breeds a ſluggiſh viſcid blood. In the former caſe, I have ſeen the limbs and whole body enormouſly ſwelled, and very hard, the belly and ſheath greatly diſtended; which were as ſurprizingly reduced in four and twenty hours, by ſlight ſcarifications, within ſide the leg and thigh, with a ſharp penknife, and three or four ſtrokes on the ſkin of the belly on each ſide the ſheath; from theſe ſcarifications there was a conſtant and ſurprizing large dripping of water, which ſoon relieved the horſe; when a few purges compleated his recovery.

Scarifying the ſkin, ſometimes very effectual.

The general cure of dropſical diſorders.

In the other ſpecies of dropſy, the curative intentions are to diſcharge the water, recover the craſis or ſtrength of the blood, and brace up the relaxed fibres throughout the whole body. To this end, purge once a week or ten days; and give intermediately

mediately either of the following drinks, or balls.

TAKE black hellebore freſh gathered, two pounds; waſh, bruiſe and boil in ſix quarts of water to four; then ſtrain out the liquor, and put two quarts of white wine on the remaining hellebore, and let it infuſe warm forty-eight hours; then ſtrain off, mix both together, and give the horſe a pint night and morning. An alterative drink.

TAKE nitre two ounces, ſquills powdered, three drams, or half an ounce; camphor one dram, honey enough to form into a ball: to be given once a day alone, or waſhed down with a horn or two of the above drink. The diuretic balls.

TAKE of the leaves and bark of elder, of each a large handful; camomile flowers half a handful, juniper berries bruiſed two ounces: boil in a quart of water, to a pint and a half; to which add honey and nitre, of each one ounce. A diuretic drink.

Give this drink every night, or night and morning; and to compleat the cure, and ſtrengthen the whole body, give a

pint of the ſubſequent infuſion every night and morning for a fortnight, faſting two hours after it.

A ſtrengthning drink.

TAKE gentian root and zedoary, of each four ounces; camomile flowers and the tops of centaury, of each two handfuls; Jeſuits bark powdered, two ounces; juniper berries, four ounces; filings of iron, half a pound: infuſe in two gallons of ale for a week, ſhaking now and then the veſſel.

Before we cloſe this chapter, we think proper to lay down the ſymptoms of an incurable farcy, that the owners of ſuch horſes may ſave themſelves unneceſſary expence and trouble in their endeavours to obtain a cure.

The ſymptoms of an incurable farcy.

When a farcy, by improper applications, or by neglect, has ſpread and increaſed, and after long continuance reſiſted the medicines above recommended; if freſh buds are continually ſprouting forth, while the old ones remain foul and ill-conditioned; if they riſe on the ſpines of the back and loins; if the horſe grows hide-bound, and runs at the noſe; if abſceſſes are formed in the fleſhy parts between

tween the interſtices of the large muſcles; if his eyes look dead and lifeleſs; if he forſakes his food, and ſcours often, and his excrements appear thin and of a blackiſh colour; if the plate or thigh vein continues large and corded after firing, and other proper applications, theſe ſymptoms denote the diſtemper to have penetrated internally, and that it will degenerate into an incurable conſumption: it is moſt probable alſo, that the whole maſs of fluids are tainted, and become irremediable by art.

CHAP. XXI.

Of Alterative Medicines.

What is meant by alterative medicines

BY alteratives, or altering medicines, are to be underſtood ſuch as, having no immediate ſenſible operation, gradually gain upon the conſtitution, by changing the humours or juices from a ſtate of diſtemperature to health. This intention in ſome caſes may perhaps be effected by correcting the acrimony of

the juices, and accelerating the blood's motions; and in others by attenuating, or breaking its particles, and dividing thoſe cohesions which obſtruct the capillaries, or finer veſſels; and ſo promote the due ſecretions of the various fluids. It is certain that many have but an indifferent opinion of a medicine, that does not operate externally, and gratify their ſenſes with a quantity of imagined *humours* injected from the body: but let ſuch people remember, that there are good humours as well as bad, which are thrown off together; that no evacuating medicine has a power of ſelecting, or ſeparating the bad from the good: and conſequently that they are thrown out only in a proportionate quantity. Theſe few hints may be ſufficient to convince the judicious reader of the great advantages ariſing from alteratives, and the preference due to them, in moſt caſes, over purgatives; unleſs it could be proved, as already mentioned, that the latter could cull out, and ſeparate from the blood the bad *humours* ſolely, leaving the good behind; but this elective power has long been juſtly exploded as ridiculous and uncertain, ſince it is plain, that all kinds of purging medicines differ only in degree of ſtrength, and operate otherwiſe upon different *humours*,

Are often to be preferred to purges.

humours, than as they ſtimulate more or leſs.

Nitre recommended as an alterative.

We ſhall therefore take this opportunity of recommending ſome alterative medicines, which are not ſo generally known as they ought to be; and that too on the ſureſt grounds, a proper experience of their good effects in repeated trials. The firſt then is nitre, or purified ſalt-petre, which has long been in great eſteem, and perhaps is more to be depended on in all inflammatory fevers than any other medicine whatever: but beſides this extenſive power of allaying inflammatory diſorders, it is now offered as a remedy, taken in proper quantities, as an alterative for ſurfeits, molten-greaſe, hide-bound, greaſe-heals, *&c.* And, as it has been known to ſucceed even in the cure of the farcy, what other diſtempers in horſes, ariſing from vitiated fluids, may it not be tried on, with a ſtrong probability of ſucceſs? This great advantage will ariſe from the uſe of this medicine over moſt others, that, as its operation is chiefly by urine, it requires no confinement or cloathing; but the horſe may be worked moderately throughout the whole courſe. This medicine has been found equally efficacious (by

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many trials made in one of our hoſpitals) in correcting the acrimony of the juices, and diſpoſing the moſt obſtinate and inveterate ſores to heal up; and hence probably it came recommended as an alterative to our horſes.

Obſervations on them.

One of our moſt eminent phyſical writers is very copious in the praiſe of this medicine, and my Lord Bacon had ſo high an opinion of it, that he believedit would prolong life; it is very certain, that it is a great reſiſter of putrefaction, which our very cooks are no ſtrangers to: if then it will preſerve the fleſh of dead animals, why not the blood and juices of living ones? That it renders them more fluid, may be proved by mixing a ſolution of it with blood freſh drawn, which will not only prevent the coagulation, but change its very colour, from a dark black to an elegant florid red, and preſerve it ſo for ſome time. Malpighius has informed us, that he injected it into the very blood-veſſels of a dog, where it intimately mixed with the blood without any detriment, or remarkable alteration, except a more copious diſcharge of urine. Its power alſo of deſtroying worms is very remarkable. In ſhort, a more uſeful medicine perhaps ſcarce exiſts, and there is

is no doubt to be made, when it comes into more general uſe, its own merit and good effects will ſufficiently recommend itſelf. We ſhould not have preſumed to ſay ſo much in its favour, were we not thoroughly convinced of its great utility, and believe it to be, in many caſes, one of the beſt and ſafeſt *alteratives* we have.

A good medicine in colds.

We have already taken notice of its great efficacy in removing fevers, and think that in the beginning of colds, (which are the forerunners of fevers) was this medicine given early, inſtead of pectoral drinks, or the uſual balls, thoſe complaints would be much ſooner removed, without incurring any danger of the diſtemper's ſettling on the lungs, which the tampering too long with thoſe ſorts of medicines too often lays a foundation for: we muſt confeſs it would be a difficult undertaking, to perſuade moſt farriers, that their healing drinks, or horſe balls, are very improper on theſe occaſions, but more eſpecially when given at firſt; but gentlemen will readily perceive the force of reaſon, when they find that the intention here aimed at, is to cool and attenuate in general the whole maſs of fluids; by which method, the

the blood, which is now become too thick to circulate freely through the ſmall veſſels of the lungs (and is the original cauſe both of the cough, ſtuffing up, and laborious breathing) is rendered ſufficiently fluid for that purpoſe, by the uſe of this medicine; as all the ſecretions are promoted by it at the ſame time.

Nitre, how to be given.

The quantity of nitre given at a time ſhould be from two to three ounces a day; let it be finely powdered, and then mix with it, by little at a time, as much honey as will form it into a ball; give it every morning faſting for a month; or it may be given at firſt for a fortnight only, intermitting a fortnight, and then repeat it. If it be obſerved that the horſe ſhews an uneaſineſs at the ſtomach after taking it, a horn or two of any liquor ſhould be given after it, or it may be diſſolved at firſt in his water, or mixed with his corn; though the ball, where it agrees, is the eaſieſt method of giving.

Beſides the mercurial medicines recommended in the farcy, which we have already animadverted on; in very obſtinate caſes, the following method of giving turbith has been found extremely ſucceſsful, after

after bleeding the horſe twice or thrice, if full of blood, and in fleſh.

TAKE turbith mineral one dram, camphor half a dram, diapente half an ounce; make into a ball with honey. A mercurial alterative.

Give one of theſe balls every other morning for a fortnight; reſt a fortnight, and then repeat them in the ſame manner. During this courſe, the horſe ſhould be kept warm, in order to heighten the perſpiration; and particular care ſhould be taken that he catches no cold: let him be bled once in ten days about two quarts; and thoſe days the balls are omitted, take him out for half an hour, if the weather is fair, and when he comes in, let him be well curried for an hour; after this courſe is finiſhed, give him a quart of hemp-ſeed in his corn every day for a month: but as the horſe's mouth will probably be ſore, his feed ſhould be boiled oats, barley, and ſcalded bran.

Mercurials operate uncertainly on horſes

As the operation of mercurials both in men and horſes is very precarious, if the quantity above mentioned gripes the horſe, or purges him, inſtead of the diapente, mix it up with two drams of philonium,

lonium, or half a ſcruple of opium, or camphor; ſhould it affect his mouth ſo much as to render him incapable of eating even ſoft food, the purging drink ſhould be given him, ſo as to procure three or four ſtools every day, and the ball forborn till this complaint is removed. But this medicine, I think, may in ſome horſes ſucceed better, by giving the turbith in leſs quantities, and for a longer time, a ſcruple every night, or half a dram every other night; which method I think ſafeſt to begin with, in order to judge of the horſe's conſtitution; and as we have more particularly explained in the chapter on FARCY. After this courſe, a ſtrong decoction of guaiacum, or the alterative powders, ſhould be given for a month; or lime-water may be given for his conſtant drink, at firſt mixed with his water, afterwards alone.

The guaiacum decoction may be prepared thus:

The ſweetning drink.

TAKE of the ſhavings of guaiacum two pounds, liquorice root ſliced four ounces, crude antimony, groſly powdered, and put into a bag, one pound; boil in three gallons of ſpring water for

for an hour, and keep the decoction upon the ingredients in a clean earthen pan for uſe.

This is both a cheap and efficacious medicine in all foulneſs of the ſkin, and very proper to be given after a courſe of mercurials; for it will ſweeten and correct the blood and juices, and, by promoting the ſecretions, dry up ſuperfluous humidities on particular parts, as in the ſtrangles, all glandular diſorders, and old running ſores. Four horns full ſhould be given twice or thrice a day, and continued two or three months in obſtinate caſes, intermitting now and then a week, that the horſe may not be cloyed with continual drenching. In what caſes to be given.

When horſes take drinks with great reluctance, powders muſt be given in their feeds; thus crude antimony, or liver of antimony finely powdered, may be given to the quantity of half an ounce, night and morning; but in all ſurfeits, gum guaiacum mixed with antimony is found more efficacious. Thus,

TAKE of crude antimony finely powdered, or, where it can be afforded, cinnabar of antimony, and The alterative powders.

gum guaiacum, of each a pound: mix together with an oily peſtle, to prevent the gum's caking: divide the whole into thirty-two doſes, *viz.* an ounce each doſe: let one be given every day in the evening feed.

Or,

An alterative ball.

TAKE of cinnabar of antimony, gum guaiacum, and Caſtile or Venice ſoap, of each half a pound; ſalt of tartar four ounces; beat them up into a maſs, and give an ounce every day. To theſe may be added very advantageouſly, an ounce and a half of camphor.

Theſe are excellent alterative medicines, particularly for ſurfeited horſes; they will rectify the fluids, open the horſe's hide, promote the ſecretions, and make him coat well; they will likewiſe fuſe and thin the blood, and therefore are extremely proper when the juices are too viſcid and ſizy, which often occaſion lameneſs in various parts: in ſhort, theſe ſort of medicines are to be preferred to moſt others of this kind, as they are given with greater ſafety, and

and require no confinement, or particular diet.

They ſeem well calculated alſo for running-horſes (eſpecially the latter) whoſe fluids of courſe, from the violence of their exerciſe, are often ſubject to great alterations; which will with more ſafety, and leſs inconvenience, be remedied by theſe means, and a gentle alterative purge given once a week or ten days, than the uſual method of treating them with ſtronger purgatives; which beſides diſqualifying them for their exerciſe for ſome time, will not alone anſwer this intention, till the blood has been ſaturated with medicines of this kind. Are proper for running-horſes.

Æthiop's mineral given to the quantity of half an ounce a day, is a very good ſweetener and corrector of the blood and juices; but it has been obſerved, after having been taken a week or ten days, to make ſome horſes ſlabber, and unable to chew their hay and oats; and the ſame ſymptoms have aroſe, where only two drams of crude mercury has been given, and continued about the ſame ſpace of time. Æthiop's mineral apt to ſalivate ſome horſes.

Whenever

The cauſe.

Whenever therefore mercurial preparations are given to horſes, they ſhould be well attended to, and ſufficient intervals be allowed, to prevent a flux on the mouth and noſe. The reaſon why theſe kind of mercurials will flux horſes ſooner than men, may be owing to the mouths of the lacteals in horſes being more open, large and free, than thoſe in men; whoſe orifices may alſo be furred up by viſcid oily things, to which inconveniences horſes are not ſo liable, by reaſon of their ſimple diet; beſides, the horizontal ſituation of the guts of horſes may contribute not a little to it, by preventing the mercury from paſſing through them ſo quick as in men; and the depending ſituation of the horſe's head, may occaſion its being ſo ſoon affected, when the blood is once ſaturated with mercurial particles.

Impracticable to ſalivate horſes.

But as it has been found impracticable to carry a horſe through a ſalivation, or even to keep him one week under it, by reaſon of the great plenitude or fullneſs brought on all the veſſels of the head, ſo that the horſe can neither chew his food, nor ſwallow liquids; whenever ſuch ſymptoms appear, the medicine muſt be

be laid aſide, till by purging, as before mentioned, they are removed.

The following mercurial alterative ball may be given under the above reſtrictions, in obſtinate caſes.

TAKE crude mercury one ounce, Venice turpentine three drams; rub them together in a mortar, till the quickſilver is thoroughly divided, and then add of gum guaiacum, finely powdered, two ounces; diagridium in powder half an ounce: mix with honey, and divide into eight balls: give one every other night for a month, or longer. During this courſe, care ſhould be taken that the horſe gets no cold, for which it is beſt proſecuted in ſummer. An alterative mercurial ball.

As may alſo the following antimonials in the like caſes.

TAKE of the glaſs of antimony, finely powdered, two ounces; crocus metallorum, finely powdered, four ounces; Venice ſoap ſix ounces: make into twelve balls with honey, and give one every night. Alterative antimonial balls.

Purging medicines given in ſmall quantities are alſo good alteratives.

The great inconveniences that attend the purging of horſes in the uſual manner, make the following method of giving thoſe kind of medicines eligible in moſt caſes; for though their operation by the bowels is thereby greatly leſſened, yet the other ſecretions are more advantageouſly increaſed; for by giving them in ſmall quantities, or combined with alteratives adapted to the caſe, they paſs into the blood, and (as has been before explained) act more powerfully, by breaking the coheſions of the viſcid fluids, cleanſing the finer veſſels, where probably obſtructions are formed, than when they act more ſenſibly on the bowels.

Thus in ſurfeits, flying lameneſſes, *&c.* give the following maſs divided into eight balls; one may be taken twice or thrice a week, according to their operation.

An alterative purge

TAKE lenitive electuary eight ounces, jalap and ſcammony powdered, of each one ounce; cinnabar, and gum guaiacum, of each two ounces; camphor half an ounce, ſyrup of buckthorn a ſufficient quantity to form them.

Or,

Or,

TAKE aloes ſix drams, gum guaiacum half an ounce, diaphoretic antimony and ſalt of tartar, of each two drams; make into a ball with any ſyrup. Forms of ſuch medicines.

Alſo,

TAKE the fineſt Succotrine aloes half an ounce, or ſix drams; cream of tartar half an ounce; powder of jallap and ſalt of tartar, of each one dram: make into a ball with oil of amber.

One of theſe may be given every week for a month or ſix weeks, with ſcalded bran, and warm water; the firſt day it will operate by urine, the next day both ways, but very gently by ſtool, unleſs it ſhould meet with a redundancy of ſlime in the bowels.

Six drams of aloes, with half an ounce of diapente and ſalt of tartar, may be given as an alterative purge in molten-greaſe, *&c.* Alterative purges.

Or,

Hiera picra and coloquintida with ſalt of tartar may be given in the ſame manner; and for obſtructions in the lungs, and to thick-winded horſes, take the following.

A gentle purge for thick wind.

Galbanum, Ammoniacum, and aſſa fœtida, of each two drams; fine aloes half an ounce, or ſix drams; ſaffron one dram; honey a ſufficient quantity.

But, as we have already occaſionally offered various forms of this kind, we ſhall avoid giving here any more ſpecimens.

Forms of diet drink.

A decoction of log-wood, prepared like that of guaiacum, is alſo ſucceſsfully given in ſurfeits.

Lime-water, prepared with ſhavings of ſaſſaphras and liquorice, is a good diet drink, to ſweeten and correct a horſe's blood; and may be given with the nitre balls for that purpoſe.

Tar-warter. alſo, as has before been hinted, may in many caſes be well worth trial:

trial: but let it be remembered, that all medicines of this kind ſhould be continued a conſiderable time, in obſtinate caſes.

CHAP. XXII.

Of HUMOURS.

THE word *humours* (which has an unbounded latitude both in *phyſick* and *farriery*, and is too often a proper ſanctuary for the ignorant to fly to in both profeſſions) ſeems to be ſtrangely miſapplied, and in general but little underſtood; otherwiſe it would not be ſo indeterminately uſed as it is, when the diſorder is not in the fluids, but merely in the veſſels.

The term humours but little underſtood.

Thus it is often affirmed, that *humours* fall down on the limbs, when with more propriety it might be ſaid, they cannot ſo well riſe up, or circulate ſo freely in perpendicular as in diagonal canals; for the force of the heart is the ſame, whether to raiſe a column of blood in an upright

Very improperly ſaid ſometimes to fall down.

or horizontal direction, though it is not the same in respect to the situation of the vessels: for when any animal is erect, the blood-vessels in the legs are more on a stretch by far than when he lies down; and if the vessels are in a lax state naturally, or relaxed by external injuries, they are not able to propel the fluids forward, and hence from a retarded circulation arises a swelling in the part affected.

Swellings in the legs often owing to relaxed vessels.

Dr. Bracken (to whom all true lovers of horses are much indebted for the pains he has taken to explode false notions, and embellish true ones) has endeavoured to set this matter in the clearest light; which indeed he has done to the satisfaction of the unprejudiced, and of every one who can understand, and does not wilfully shut his eyes on so clear a doctrine.

The study of anatomy absolutely necessary.

It would be to little purpose therefore to enforce it, unless the reader would be at the pains to form to himself a clear idea of the blood's circulation, with the secretions from it; and consider the solids as composed of elastic fibres, or springy threads, which are sometimes in a lax or loose state, and at others in a tight or firm one.

This

This knowledge would ſoon convince him, that the extreme parts may be ſwelled without humours falling down upon them, from a difficulty in the circulation (as before explained) to puſh on blood in perpendicular columns, or from a laxity of the veſſels themſelves.

The falling down of humours explained by a familiar caſe.

In order to make this doctrine as familiar as poſſible, let us ſuppoſe that a man, or horſe, in perfect health, whoſe blood and juices are in the beſt condition, receives a violent blow on the leg, the conſequence of which is a bruiſe, and ſwelling: if the limb of either is kept in a perpendicular ſituation with little or no motion, the ſwelling will continue; and we may ſay, if we pleaſe, the *humours* are fallen into it: but change only the poſition, and continue the limb of either in a ſupine or level one; the ſwelling will then ſoon abate, and the *humours* diſappear. In this caſe, where were the *humours* before the accident; how came they ſo ſuddenly to the injured limb, and ſo ſoon to diſappear? Is it not more reaſonable to ſuppoſe the ſwelling aroſe from a retarded circulation in the part injured, the veſſels by the violence of the blow having loſt their tone, and were ſo preternatu-

Swellings accounted for from retarded circulation.

ternaturally distended by the stagnant blood, that a free circulation through the part was thereby interrupted; and that this swelling would have continued, had not the obstruction been removed by a different posture, assisted by proper applications? and is it not obvious in dropsical, and other swellings, in the extreme parts, from lax fibres, that though the legs shall be enormously swelled, after having been in an erect posture all the day; yet that after laying twelve hours in a supine one, they shall recover their natural shape?

Exemplified in dropsical habits.

The blood and juices often vitiated.

This is by no means intended to prove, that there are no bad humours, or juices, in the blood, or that they do not attend, and affect some particular parts; (daily experience would contradict such an assertion, particularly in cancerous, schrophulus, venereal, and scorbutic cases in the human body, and the farcy, surfeits, strangles, *&c.* in horses;) but only to guard against the promiscuous use of the term, and to evince, that in many cases where the humours are said to abound, and cause swellings, the fault is in the vessels, which have not force enough to propel the circulating fluids, or a perpendicular column of blood; as often happens

happens to the veſſels of the legs and extreme parts.

Thus we ſee that a languid circulation, relaxed veſſels, and want of muſcular power to puſh on the fluids, may, by retarding the circulation, occaſion ſwellings in the extreme parts, without any ſuſpicion of bad humours, or the blood's being at all in fault. This might be farther illuſtrated by thoſe ſwellings in man, called the piles, where the aſcent of the venal blood interrupted by its own weight, the want of force in the veſſels, and of aſſiſtance from the circumjacent parts to puſh on the circulation: but, we hope, what has already been ſaid, will ſufficiently anſwer our deſign. Limbs may be ſwelled without humours.

The inference to be drawn from hence is, that the cure muſt be differently directed when the ſwelling proceeds from the blood and juices, and when from the ſolids or veſſels. In the former caſe, evacuations and alteratives are neceſſary to leſſen their quantity, and rectify their quality; in the latter, externals, proper exerciſe, and good diet. The cure muſt be directed accordingly.

Conformably ſwelled legs, ariſing from poverty of blood, laxity of veſſels, and low Muſt be varied in different habits.

low diet, would be increaſed by evacuations, and cured by recruiting the conſtitution But ſwelled legs from a groſs conſtitution, where the veſſels are too replete, and the blood in bad condition, will ſeldom be cured without bleeding, purging, roweling, and alteratives; unleſs, perhaps the horſe is turned out to graſs.

The word humours ſtrangely abuſed by farriers.

To treat this ſubject properly, and prove in a ſtrict ſenſe what ought to be underſtood by the word *humours*, would take up more time than the brevity we have preſcribed ourſelves will admit on; but theſe hints may be ſufficient to expoſe the abſurd cant of farriers, who are eternally miſapplying a term they by no means underſtand, and making the word *humours* ſubſervient to all purpoſes.

Obſervations on humours.

We ſhall conclude this chapter however with obſerving, that there are more than thirty different juices, or *humours*, conſtantly floating in, and ſeparated from the blood; the chief of which are the bile, perſpirable matter, ſweat, ſaliva, urine, lymph, ſeed, *&c.* which, when properly mixed and thrown off in due quantity from it, are extremely neceſſary to the health, and welfare of the animal; but

but when once perverted, irregularly carried on, or ſuppreſſed, they then become noxious, and are productive of many and various diſorders. Thus from an obſtruction of the bile, the yellows, St. Anthony's fire, eryſipelatous fevers and ſwellings may be occaſioned; the conſequence of ſo acrimonious a fluid mixing unduly with the blood: by colds, or a ſudden checking of ſweats, or perſpiration, that matter which ſhould freely flow off through the pores, is ſuddenly thrown back on the blood, which increaſes its quantity, and vitiates its quality; from hence the ſerum of the blood may become acrid and ſharp; the maſs of fluids in general may thus be tainted, and by thickening, form obſtructions in the glands, or fine veſſels: the other juices, or humours, may alſo be perverted by various cauſes, as foul feeding, improper diet. *&c.* and produce variety of diſeaſes, by rendering the blood too thick, thin, or acrimonious. Thus much we have thought neceſſary to obſerve in relation to *humours*; wherein may be obſerved, how much the term is miſunderſtood and abuſed; as in their natural ſtate, they are not only amicable, but neceſſary: yet when obſtructed or perverted, they are the cauſe of almoſt all diſeaſes: How they become noxious.

diſeaſes; that, in fine, health conſiſts in a due temperature, or mixture of them, and the predominancy of any one, is ſufficient to excite a morbid ſtate in that conſtitution.

CHAP. XXIII.

Of ROWELLING.

Rowelling defined.

THERE ſeems to be no remedy ſo much made uſe of, and ſo little underſtood by farriers in general, as rowels; for which reaſon we ſhall endeavour to ſet the whole affair in a clearer light, than hitherto it has appeared in.

We ſhall begin then by deſcribing rowelling, which is an artificial vent made between the ſkin and fleſh, in order to unload and empty the veſſels in general, and thereby relieve particular parts, when too much oppreſſed by a fulneſs or redundancy.

The general notion concerning rowels abſurd.

The general and abſurd reaſoning of farriers on the effects and uſe of rowelling, in ſome meaſure makes this chapter the

the more neceſſary, as it is too notorious how impertinently they talk on this ſubject: for, in ſhort, with them, a rowel is to draw off all the bad and corrupt humours from the blood, by a ſort of magick.

What the diſcharge.

It is neceſſary to obſerve, that the matter generally diſcharged by a rowel, is nothing more than an ouzing from the extremities of the veſſels divided in the making of it; in fact then, it is blood, which loſes its colour, by being ſhed out of the veſſels, the warmth of the part, and its confinement.

The uſe of rowels.

If this is granted, it will evidently appear, that the good effects enſuing this operation muſt be owing to a gradual depletion, or emptying of the veſſels in general; by which means the ſurcharge, or load on a particular part, is taken off and removed; and impurities, or bad juices (generally called humours) run off with the good in proportion to their quantity in the blood.

Particular humours not diſcharged by them.

To imagine *particular humours* are thus ſeparately, and alone diſcharged from the blood, through theſe orifices, is an opinion but too generally received, though

though a very abſurd one; and muſt be very pernicious in its conſequences, from the bad effects it may have in practice; as muſt the ſame reaſoning alſo in regard to purging.

Rowels, when improper.

Thus to lean hide-bound horſes, and thoſe of a dry hot conſtitution, the diſcharge, by depriving the conſtitution of ſo much blood and fluids, is daily exhauſting the ſtrength of the animal; and may be productive of bad conſequences, by defrauding the conſtitution of a neceſſary fluid.

When proper.

But in diſorders from fulneſs, attended with acrimony, or ſharpneſs of the juices, and with defluxions on the eyes, lungs, or any part of conſequence; the gradual diſcharge, brought on by theſe means, will contribute to leſſen the fulneſs on the parts affected, and give the veſſels an opportunity of recovering their tone, while evacuating and alterative medicines are doing their office.

Obſervations.

It may be neceſſary, however, to obſerve, that there is a wonderful communication between the veſſels of the cellular membrane under the ſkin, which remarkably appears, by inflating thoſe of ſheep,

ſheep, calves, *&c.* by the butchers; hence probably it is that ſome diſorders of this integument are ſo apparently relieved by iſſues, or rowels, without our having any recourſe to that general depletion of the veſſels, we have juſt obſerved, to account for it; and hence alſo may be deduced their utility, ſometimes in draining off any extravaſed fluids, which may lodge between the interſtices of the muſcles, after violent ſtrains of the ſhoulder; alſo in diſcharging ſuch vitious, or ſharp fluids, as are thrown on the membranes, and occaſion thoſe flying pains, and lameneſſes, which we find are often removed by this local remedy.

How uſeful in ſtrains.

Theſe obſervations, with ſome few interſperſed in the preceding chapters, it is hoped, will be of ſome uſe to reconcile a very vague term to ſome meaning.

CHAP.

CHAP. XXIV.

Of Strains *in* Various Parts.

Strains described.

IT is neceſſary to obſerve, that in all ſtrains, the muſcular or tendinous fibres are overſtretched; and ſometimes ruptured, or broke. To form therefore a true idea of theſe diſorders, let us firſt conſider every muſcle and tendon as compoſed of ſpringy, elaſtic fibres, which have a proper power of their own to contract and extend themſelves; or, to make their action more familiar, let us compare them to a piece of cat-gut, that we may the better judge with what propriety oily medicines are directed for their cure. Thus then, if by a violent extenſion of this cat-gut, you had ſo overſtretched it, as to deſtroy its ſpringineſs or elaſticity, and was inclined to recover its loſt tone; would you for that purpoſe think of ſoaking it in oil? And is not the method of treating ſtrains, or overſtretched muſcles and tendons, full as prepoſterous, when you bathe or ſoak them in oily medicines, at a time that they want reſtringents to brace them up?

Oily medicines improper for ſtrains.

Yet

Yet cuſtom has ſo eſtabliſhed this practice, and fallacious experience ſeemingly ſo confirmed it, that it would be a difficult taſk to convince the illiterate and prejudiced, of the abſurdity; who, by attributing effects to wrong cauſes, are led into this error, and the oils uſurp the reputation that is due only to reſt and quiet: they ſeem, however, to be aware of the ill conſequences, by their adding the hot oils, as ſpike turpentine, and origanum; which though they in ſome meaſure guard againſt the too ſuppling quality of the other oils, yet the treatment is ſtill too relaxing to be of real ſervice.

Bandage and reſt proper in ſtrains.

And indeed, in all *violent* ſtrains of either tendon or muſcles, whatever opinion we may entertain of bathing and anointing with favouring noſtrums, which often ſucceed in ſlight caſes, where perhaps bandage alone would have done; yet it is the latter, with proper reſting the relaxed fibres, till they have thoroughly recovered their tone, that are the chief things to be depended on; and frequently ſome months are neceſſary for effecting the cure.

Time and turning to graſs often neceſſary.

All violent ſtrains of the ligaments, which connect the bones together, eſpecially thoſe of the thigh, require time, and turning out to graſs, to perfect a recovery. External applications can avail but little here, the parts affected laying too deep, and ſo ſurrounded with muſcles, that medicines cannot penetrate to them. The ſooner, in theſe caſes, a horſe is turned out to graſs, the better, as the gentle motion in the field will prevent the ligaments and joint-oil from thickening, and of courſe the joint itſelf from growing ſtiff; nor do I believe that firing, ſo commonly practiſed in this caſe, is of half the conſequence as reſt, and turning out for a conſiderable time; which, by the bye, is always adviſed at the ſame time the horſe is fired. I could not avoid ſaying thus much, in order to ſhew the great advantages of reſt in all ſtrains, and that no horſe ſhould be worked till he is thoroughly recovered.

The ſigns of a ſtrained ſhoulder.

When a horſe's ſhoulder is overſtrained, he does not put out that leg as the other, but to prevent pain, ſets the ſound foot hardily on the ground to ſave the other; even though he be turned ſhort on the lame ſide, which motion tries him the moſt

moſt of any. When trotted in hand, inſtead of putting his leg forward in a right line, he forms a circle with the lame leg; and when he ſtands in the ſtable, that leg is advanced before the other.

In order to cure this lameneſs, firſt bleed him, and let the whole ſhoulder be well bathed three times a day with hot verjuice or vinegar, in which may be diſſolved a piece of ſoap; but if the lameneſs continues without ſwelling, or inflammation, after reſting two or three days, let the muſcles be well rubbed for a conſiderable time, to make them penetrate, with good opodeldoch, or either of the following mixtures. The cure.

TAKE camphorated ſpirits of wine, two ounces; oil of turpentine, one ounce; this proportion will prevent the hair coming off. Mixtures for ſtrains.

Or,

TAKE the beſt vinegar, half a pint; ſpirit of vitriol, and camphorated ſpirit of wine, of each two ounces.

When the ſhoulder is very much ſwelled, it ſhould be fomented with wollen A fomentation.

cloths (large enough to cover the whole) wrung out of hot verjuice and ſpirit of wine; or a fomentation prepared with a ſtrong decoction of wormwood, bay-leaves, and roſemary; to a quart of which may be added half a pint of ſpirit of wine.

Boring and pegging condemned.

A rowel in the point of the ſhoulder in this caſe often does great ſervice; eſpecially if the ſtrain has been very violent, and the ſwelling very large; but as to boring up the ſhoulder with a hot iron, and afterwards inflating it, is both a cruel and abſurd treatment; and the pegging up the ſound foot, or ſetting on a patten-ſhoe, to bring the lame ſhoulder on a ſtretch, is a moſt prepoſterous practice, and directly calculated to render a horſe incurably lame; for it can only be neceſſary in caſes the very oppoſite to this, where the muſcles have been long contracted, and we want to ſtretch them out.

Reſtringent poultices very proper in ſtrains.

Where poultices can be applied, they are at firſt undoubtedly very effectual, after bathing with hot vinegar or verjuice, and are to be preferred greatly to cold charges, which, by drying ſo ſoon on

on the part, keep it ſtiff and uneaſy: let them be prepared with oatmeal, rye-flower, or bran, boiled up in vinegar, ſtrong beer, or red wine lees, with lard enough to prevent their growing ſtiff; and when by theſe means the inflammation and ſwelling is brought down, bathe the part twice a day with either of the above mixtures, opodeldoch, or camphorated ſpirits of wine; and roll the part three or four inches, both above and below, with a ſtrong linen roller, of about two fingers width; which will contribute not a little to the recovery, by bracing up the relaxed tendon; and perhaps is more to be depended on than the applications themſelves.

Bandage adviſed.

As opodeldoch is variouſly made, and thoſe uſually ſold in the ſhops do not ſeem ſo well calculated for horſes, we ſhall inſert the following, as better adapted to this purpoſe, and recommend it to be kept ready prepared for the uſe of the ſtable; it being not only very proper for the above uſe, but for bruiſes, cold ſwellings, benumbed parts, and for diſperſing many other ſuch ſort of tumours: it may occaſionally alſo be given internally for the gripes from wind, or taking cold; for the ſtrangury, alſo and as a

cordial; one ounce or more may be taken for a dose in a pint of ale.

A warm liniment, or opodeldoch.

TAKE Jamaica pepper, four ounces; Winter's bark, caraway seeds, laurel, and juniper-berries bruised, of each two ounces; rosemary, marjoram, and lavender flowers, of each one ounce; rectified spirit of wine, three pints: let them digest in a warm place ten days, then strain off the tincture, and dissolve in it Venice soap a pound and a half; camphor, three ounces; Barbadoes tar, four ounces; oil of turpentine, six ounces; oil of amber, two ounces: mix and make a liniment.

Signs of strains in the coffin.

In strains of the *coffin-joint*, that have not been discovered in time, there will grow such a stiffness in the joint, that the horse will only touch the ground with his toe; and the joint cannot be played with the hand: the only method here is repeated blistering, and then firing superficially.

Strains in the back sinews howknown and cured.

Strains of the *back sinews* are very common, and are easily discovered by the swelling, which extends sometimes from the back side of the knee down to the

the heel, but for the moſt part the horſe ſets that leg before the other. The tendon ſhould be well bathed three or four times a day with hot vinegar; and if much ſwelled, apply the poultices above recommended; and when the ſwelling is down, bathe with the mixtures above, or with camphorated ſpirit of wine and oil of amber, in which is diſſolved as much camphor as the ſpirits will take up; and roll up the tendon with a proper bandage, or laced ſtocking; which laſt properly fitted to the limb, might be wore to great advantage, not only in theſe ſort of injuries, but in moſt others, where there is a diſpoſition to the greaſe, or other ſwellings of the limbs, from weak and relaxed fibres. Curriers ſhavings wetted with vinegar have been found uſeful for this purpoſe: as has alſo tar and ſpirit of wine; but where the tendon has ſuffered by repeated injuries of this kind, the caſe will demand bliſtering, firing, and proper reſt.

Remedies for ſtrains

Strains of the *knees* and *paſterns* ariſe frequently from kicks, or blows; if they are much ſwelled, apply firſt the poultices; and when the ſwelling is abated, bathe with the above, or the following.

Strains of the knees and paſterns.

Mixtures for ſtrains.

TAKE vinegar, one pint; camphorated ſpirits of wine, four ounces; white vitriol, diſſolved in a little water, two drams.

Or,

TAKE the whites of three or four eggs, beat them into a froth with a ſpoon; to which add an ounce of roach-alum, finely powdered; ſpirit of turpentine, and wine, of each half an ounce: mix them well together.

The following is alſo much recommended by the French writers, and has been found very ſucceſsful in ſome old ſtrains, when other remedies have failed.

A poultice for old ſtrains.

TAKE one pound of tar, and two of rectified ſpirit of wine: ſtir them together over a fire till they incorporate (but take care the flame does not catch the ſpirits:) then add two ounces of bole, finely powdered; and a ſufficient quantity of oatmeal to bring it to the conſiſtence of a poultice; to which add lard enough to prevent its growing dry: apply it ſpread on cloth twice a day.

As

As great weakneſs remains in the paſterns after violent ſtrains, the beſt method is to turn the horſe out to graſs till he is perfectly recovered; when this cannot be complied with the general way is to bliſter and fire. Turning out to graſs, when proper.

When a horſe is lame in the *ſtifle*, he generally treads on his toe, and cannot ſet the heel to the ground. Treat him at firſt with the vinegar and the cooling reſtringents; but if a large ſwelling, with puffineſs, enſues, foment it well with the diſcutient fomentation till it diſperſes; and then bathe the part with any of the above medicines. The ſigns of lameneſs in the *ſtifle*.

A lameneſs in the *whirle-bone* and hip is diſcovered by the horſe's dragging his leg after him, and dropping backward on his heel when he trots. If the muſcles of the hip are only injured, this kind of lameneſs is cured eaſily; but when the ligaments of the joint are affected, the cure is often very difficult, tedious, and uncertain. In either caſe, at firſt bathe the parts well with the cooling medicines, four or five times a day; in the muſcular ſtrain this method alone may ſucceed; but in the ligamentous, it is The ſigns of lameneſs in the *whirl-bone*.

is reſt and time only can reſtore the injured parts to their proper tone.

Strains in the hock.

Strains in the *hock* are to be treated by ſoaking the parts with coolers and repellers; but when the ligaments are hurt, and they are attended with great weakneſs and pain, uſe the fomentation. If a hardneſs ſhould remain on the outſide, it may be removed by repeated bliſtering; if within it may be out of the power of any external applications to remove; however, the joint ſhould be fired gently with ſmall razes or lines pretty cloſe together, and then covered with a mercurial plaiſter. To the diſcutient fomentation above mentioned may be added crude ſal armoniac, with a handful of wood aſhes boiled in it.

The bliſtering ointment for the above purpoſes may be found in the chapter of *Bone-Spavin*; but the ſublimate ſhould be omitted.

Firing for ſtrains on the ſinews how it ſhould be performed.

The *firing* uſed for the ſtrengthening relaxed ſinews or tendons ſhould act only on the ſkin, which by contracting and hardening it all round the ſinews, compreſſes them more firmly like a bandage. The bow-men of old ſubmitted to

to this operation, in order to give ſtrength to the muſcles and tendons of their arms. A proper degree of ſkill is very requiſite to perform it effectually on a horſe; for a due medium ſhould be obſerved, and the inſtrument neither ſo ſlightly applied, as to ſcarify the ſkin only ſuperficially, nor ſo deep as to wound or cauterize the ſinew or its ſheath: in the former caſe, the wounds not penetrating the ſkin at all, the ſcars would not be hard enough to act with a ſufficient preſſure on the tendon; and in the latter, the fire being given too deep, might ſlough off the tendon itſelf, the conſequence of which would be a loſs of ſubſtance, and of courſe a lameneſs would enſue from a contracted ſinew. The lines ſhould be drawn pretty cloſe together on each ſide of the joint or ſinew, following the courſe of the hair; no croſs-lines ſhould be made, as they but disfigure the horſe afterwards, without any real uſe. The firing inſtrument, or knife, ought to be a little rounded on the edge, gradually thickening to the back, that it may retain the heat for ſome time, but ſhould not be applied till the flaming redneſs is partly gone off. The cauterized parts may be bathed with ſpirit of wine at firſt, and anointed afterwards with

bees-wax and oil; which alone is sufficient to complete the cure.

CHAP. XXV.

Of TUMOURS *and* IMPOSTHUMES.

TUMOURS, or swellings arise either from external injuries, or internal causes.

Swellings from external causes, how treated.

Swellings caused by external accidents, as blows and bruises, should at first be treated with restringents; thus let the part be bathed frequently with hot vinegar or verjuice, and, where it will admit of bandage, let a flannel wetted with the same be rolled on; if by this method the swelling does not subside, apply, especially on the legs, a poultice with red wine lees, strong-beer grounds, and oatmeal, or with vinegar, oil, and oatmeal; either of these may be continued twice a day after bathing, till the swelling abates; when, in order to disperse it entirely, the vinegar

vinegar ſhould be changed for camphorated ſpirit of wine, to four ounces of which may be added one of ſpirit of ſal armoniac; or it may be bathed with a mixture of two ounces of crude ſal armoniac boiled in a quart of chamber-lye, twice a day, and rags dipped in the ſame may be rolled on.

Fomentation made by boiling wormwood, bay-leaves, and roſemary, and adding a proper quantity of ſpirits, are often of great ſervice to thin the juices, and fit them for tranſpiration; eſpecially if the injury has affected the joints. Fomentations often neceſſary.

But in bruiſes, where the extravaſated blood will not by theſe means be diſperſed, the ſhorteſt way is to open the ſkin, and let out the grumes.

Critical tumours, or ſwellings, which terminate fevers, ſhould by no means be diſperſed; except when they fall on the paſtern or coffin-joint, ſo as to endanger them: in this caſe the diſcutient fomentation, p. 227. ſhould be applied three or four times a day, and a cloth or flannel frequently wrung out of the ſame ſhould be bound on, in order to keep the joint continually breathing. Obſervation.

But

Critical swellings should be brought to matter.

But if the swelling fixes under the jaws, behind the ears, on the poll, withers, or in the groins and sheath, *&c.* it should be encouraged and forwarded by ripening poultices, wherever they can be applied; oatmeal boiled soft in milk, to which a proper quantity of oil and lard is added, may answer this purpose; or the poultice recommended in the chapter of *Strangles*: these may be applied twice a day till the matter is perceived to fluctuate under the fingers, when it ought to be let out; for which purpose let the tumour be opened with a knife, or strong launcet, the whole length of the swelling, if it can be done safely; for nothing contributes so much to a kind healing, as the matter's having a free discharge, and the openings being big enough to dress to the bottom.

The sore how dressed.

Pledgets of tow spread with black or yellow basilicon (or the wound ointment) and dipped in the same, melted down with a fifth part of oil of turpentine, should be applied to the bottom of the sore, and filled up lightly with the same, without cramming; it may be thus dressed once or twice a day, if the discharge is great, till a proper digestion is procured,

cured, when it ſhould be changed for pledgets ſpread with the red precipitate ointment, applied in the ſame manner.

Fomentations and poultices recommended to help digeſtion.

Should the ſore not digeſt kindly, but run a thin water and look pale, foment as often as you dreſs, with the above fomentation; and apply over your dreſſing the ſtrong-beer poultice, and continue this method till the matter grows thick, and the ſore florid.

The following ointments will generally anſwer your expectations in all common caſes, and may be prepared without, as well as with, the verdigreaſe.

The wound ointment.

TAKE Venice turpentine and bees-wax, of each a pound; oil of olives, one pound and a half; yellow roſin, twelve ounces: when melted together, two or three ounces of verdigreaſe, finely powdered, may be ſtirred in, and kept ſo till cold, to prevent its ſubſiding.

The red precipitate ointment.

TAKE of yellow baſilicon, or the above ointment, without verdigreaſe, four ounces; red precipitate, finely powdered, half an ounce: mix them

them together cold, with a knife or ſpatula.

Howuſed. This laſt, applied early, will prevent a fungus, or proud fleſh, from ſhooting out; for if you dreſs too long with the above digeſtive, the fungus will riſe faſt, and give ſome trouble to ſuppreſs it; when it will be neceſſary to waſh the ſore, as often as you dreſs, with a ſolution of blue vitriol in water, or to ſprinkle it with burnt alum and precipitate. If theſe ſhould not be powerful enough, touch with a cauſtick, or waſh with the ſublimate water, made by diſſolving half an ounce of corroſive ſublimate in a pint of lime-water.

The ſublimate waſh.

Obſervation. But this trouble may in a great meaſure be prevented, if the ſore is on a part where bandage can be applied with compreſſes of linen cloth: for even when theſe excreſcences regerminate, as it were, under the knife, and ſpring up in ſpite of the cauſticks above mentioned, they are to be ſubdued by moderate compreſſion made on the ſprouting fibres, by theſe means.

Wherein authors are deficient Authors on farriery have in general given very proper receipts to anſwer every

every intention of this kind by medicines; but as they have not, I think, laid down ſufficient rules for their application in thoſe caſes where they are moſt wanted, I hope the following general directions will not be unacceptable; as the difficulty in healing ſome kinds of ſores ariſes frequently from the unſkilful manner of dreſſing them.

How ſores ſhould be dreſſed.

It may be neceſſary then to obſerve here once for all; that the cures of moſt ſores are effected by the ſimpleſt methods, and that it is often of much more conſequence to know how to dreſs a ſore, than *what* to dreſs it with; and in this conſiſts indeed the chief art of this branch of ſurgery; for the moſt eminent in that profeſſion have long ſince diſcovered, that variety of ointments and ſalves are unneceſſary in the cure of moſt wounds and ſores, and they have accordingly diſcarded the greateſt part, formerly in repute for that purpoſe; repeated obſervations having taught them, that after the digeſtion, nature is generally diſpoſed to heal up the wound faſt enough herſelf, and that the ſurgeon's chief care is to prevent a luxuriency commonly called *proud fleſh*; which all ointments, wherein lard or oil enters, are but too

prone to encourage, as they keep the fibres too lax and ſupple: and which dry lint alone, early applied, as eaſily prevents, by its abſorbing quality, and light compreſſion on the ſprouting fibres.

Some particular directions for that purpoſe.

Thus, if a hollow wound or ſore is crammed with tents, or the dreſſings are applied too hard, the tender ſhoots of fleſh from the bottom are prevented puſhing up; and the ſides of the ſore in time from this diſtention may grow horny, and turn fiſtulous: nor has the matter by this method a free diſcharge.

On the other hand, if ſores of any depth are dreſſed ſuperficially, the external parts being more diſpoſed to heal and come together than the internal, they will fall into contact, or heal too ſoon; and the ſore not filling up properly from the bottom, will break out afreſh.

Hence we may juſtly conceive what little ſtreſs is to be laid on famous ointments, or family ſalves, unſkilfully applied; for unleſs this due medium is obſerved, or obtained in the dreſſing, no hollow ſore can heal up properly.

I thought

I thought it neceſſary to be a little explicit on this head, as gentlemen ſo frequently complain of being diſappointed in their cures, notwithſtanding the excellency of their ointment, or balſam; and to convince them, that leſs confidence ſhould be put in theſe favourite medicines than is generally imagined; for where the habit is ſound, and the blood and juices in good condition, there are few ſimple dreſſings that will not ſucceed; and when otherwiſe, the moſt pompous will not avail, till theſe are rectified by proper internal medicines.

Frequent diſappointments happen from dreſſing unſkilfully.

As ſoon then as a good digeſtion is procured (which is known by the thickneſs and whiteneſs of the matter diſcharged, and the florid red colour at the bottom of the ſore) let the dreſſings be changed for the precipitate medicine; or the ſore may be filled up with dry lint alone, or dipped in lime-water with a little honey and tincture of myrrh, or brandy; about a fifth part of the latter to one of the former: a pledget of lint dipped in this mixture ſhould alſo be applied to the bottom of the ſore, which ſhould be filled up with others to the ſurface or edges, but not crammed in too

The ſigns of good digeſtion.

hard as before obſerved, nor yet applied too looſely.

Digeſtive ointments ſhould not be continued too long.

By this method, the ſore would incarn or heal up properly, and ſoft ſpongy fleſh would be prevented or ſuppreſſed in time; whereas, when ointments or ſalves are too long continued, a fungus, or proud fleſh, is thereby ſo encouraged in its growth, that it requires ſome time to deſtroy and eat it down again: a proper compreſs of cloth, and a linen roller, is abſolutely neceſſary both for this purpoſe, and to ſecure on the dreſſings, wherever they can conveniently be applied.

An over-reach deſcribed.

To illuſtrate what has been ſaid, I ſhall take this opportunity of ſhewing how a wound from an over-reach ſhould be treated, as I find it ſometimes proves very difficult of cure. This wound is cauſed by the point of the hind ſhoe's cutting into the horſes fore heel; and when it is only ſuperficial, or ſlight, is in general eaſily cured by waſhing it clean, and applying the wound-ointment: but it ſhould be obſerved, from the nature and manner of the injury, where the blow has been ſmart, that it differs widely from a common cut; the part here being both torn and bruiſed; and conſe-

conſequently it requires to be properly digeſted in order to lay a good foundation for healing.

How cured.

For this purpoſe, after waſhing out any dirt or gravel with ſoap ſuds, &c. let the wound be digeſted, by dreſſing it with doſſils of lint dipped in an ounce of Venice turpentine, divided with the yolk of an egg, to which half an ounce of tincture of myrrh may be added; over this dreſſing I ſhould adviſe the turnep-poultice, or that with ſtrong-beer grounds and oatmeal, to be applied three or four times, or oftener, till the digeſtion is procured, which is known by the ſigns abovementioned, and then both theſe dreſſings may be changed for the precipitate medicines, or the lime-water mixture; obſerving always to apply the doſſils carefully to the bottom to fill up the ſore with the ſame even to the ſurface, and to bind all on with a compreſs and roller: and if any cavities appear, that cannot conveniently be dreſſed to the bottom, they ſhould always be laid open, or no proper foundation for healing can be obtained. The hoof alſo ſhould be kept ſupple, or pared away, when the growth of it interrupts this end, as ſometimes is the caſe.

CHAP. XXVI.

Of WOUNDS *in General.*

The lips of all fresh wounds should be brought into contact.

IN all fresh wounds made by cutting instruments, there is nothing more required than bringing the lips of the wound into contact by suture or bandage, provided the part will allow of it; for on wounds of the hips, or other prominent parts, and across some of the large muscles, the stitches are apt to burst on the horse's lying down and rising up in the stall; in such cases the lips should not be brought close together: one stitch is sufficient for a wound two inches long; but in large wounds, they should be at an inch or more distance; and if the wound is deep in the muscles, care should be taken to pass the needles proportionably deep, otherwise the wound will not unite properly from the bottom.

How bleeding in wounds should be stopped.

Should the wound bleed much from an artery divided, the first step should be to secure it, by passing a crooked needle underneath, and tying it up with a waxed thread: if the artery cannot be got at

at this way, apply a button of lint or tow to the mouth of the bleeding veſſel, dipped in a ſtrong ſolution of blue vitriol, ſtyptic water, oil of vitriol, or hot oil of turpentine, powdered vitriol, or colcothar, *&c.* and remember always to apply it cloſe to the mouth of the bleeding veſſels, and take care that it is kept there by proper compreſs and bandage till an eſchar is formed; otherwiſe it will elude your expectations, and frequently alarm you with freſh bleedings.

The efficacy of puff-balls.

In a memoir preſented to the Royal Academy of Sciences by M. La Foſſe he gives an account of the ſucceſs he had met with in ſtopping the bleedings of very conſiderable arteries in horſes by the application of the powder of puff-balls, the arteries cicatrizing by this means only, without any ſucceeding hæmorrhage. This Lycoperdon, or puff-ball, was made uſe of for this purpoſe in human ſubjects, about 160 years ago, by Felix Wurtz, a famous old ſurgeon in Germany; but he does not ſeem to have a thought of truſting to it in ſuch conſiderable arteries, as M. La Foſſe mentions, *viz.* thoſe of the leg and thigh, the bleedings from which divided veſſels he ſtopt in a few minutes by the uſe of this pow-

der only. The agarick of the oak may alſo be uſed for this purpoſe, where it can be retained by a proper bandage.

How ſtyptick act. Theſe applications, as indeed all ſtypticks, ſeem to act by conſtringing the extremity of the veſſel, or choaking it up, till a grume of blood is formed internally, which plugs up the orifice; and has been found to adhere to it ſo, as to conſtitute one body with the veſſel. M. La Foſſe has proved this by ſlitting an artery up longitudinally, when he found that the little grume of clear blood was of a firm conſiſtence, of a lively red, in form of a cone or ſugar-loaf, the baſis of which adhered to the little incloſing membrane, which ſhut up the artery without; the pocar of which floated in the cavity of the veſſel.

Obſervations. I purpoſely avoid ſetting down any famous receipts for freſh wounds, whether ointments, or Fryar's balſams, being well aſſured, that in a healthy ſound conſtitution, nature furniſhes the beſt balſam, and performs herſelf the cure, which is ſo often attributed to the medicine: when it is otherwiſe, and the blood is deprived of its balſamic ſtate, as will appear from the aſpect of the wound, and its manner of

of healing, it must be rectified by proper internal medicines, before a good foundation for healing can be laid by any external applications whatever.

Fresh wounds, how dressed.

The lips of the wound then being brought together by the needle or bandage, it needs only to be covered with rags dipped in brandy, or a pledget of tow spread with the wound-ointment, in p. 239. the directions in the preceding chapters being observed, and the wounded part kept as much as possible from motion.

Observation.

Remember to dress all wounds of the joints, tendons, and membranous parts, with terebinthinate medicines; to which may be added honey and tincture of myrrh; and avoid all greasy applications whatever: fomentations and poultices are also generally here of great use; the former thin and attenuate the impacted fluids, greatly promote a free perspiration in the limb, and facilitate the unloading the surcharge on the vessels, by quickening the motion of the fluids; while the latter, by relaxing the vessels, abate their tension, and relieve the obstruction, by promoting digestion.

Punctured

Punctured wounds, how treated.

Punctured wounds from thorns, or any other accidents, ſhould be treated in the ſame manner; applying the beer, or bread and milk poultice over the dreſſing, till ſome ſigns of digeſtion appear, and fomenting the part well every day. This method is alſo very ſucceſsfully uſed to

Swellings from bleeding, how treated.

thoſe ſwellings, which often ariſe on the neck from bleeding, the ſores being ſprinkled with precipitate, and burnt alum powdered, to fetch out the core, or fungus, which choaks up the orifice. The uſual method is to introduce a piece of vitriol, or ſublimate, which often brings on a plentiful diſcharge, fetches out the core, and makes a cure; but it is often with the loſs of the vein, and it ſometimes leaves a large ſwelling and impoſthumation.

Gun ſhot wounds, how treated.

In gun-ſhot wounds, when the ball has not penetrated too deep, it ſhould be extracted, if it can be fetched away without diſturbance, together with any extraneous bodies that might paſs in with it; the wound ſhould be dreſſed with the old digeſtive of Venice or common turpentine, divided with the yolks of eggs, to which may be added ſome honey and tincture of myrrh. The entrance of theſe

theſe wounds frequently requires to be enlarged, and a depending orifice ſhould always be procured, if poſſible; and if the wound ſhould not digeſt kindly, apply the beer-poultice, and foment with the diſcutient fomentation, p. 237.

In ſcalds, or burns from gunpowder, or any other cauſe, when the ſkin remains intire, bathe the part well, and keep it ſoaked with rags dipped in ſpirit of wine camphorated: ſalt bound thick on the part has been found very effectual for this purpoſe: and indeed all ſaline and ſpirituous applications excel others, while the ſkin is yet unbroke; but when the ſkin is ſeparated, anoint the part, and keep it conſtantly ſupple with linſeed or ſallad oil, and a plaiſter ſpread with bees wax and oil: if the ſkin is ſo ſcorched, that ſloughs muſt be digeſted out, dreſs with the wound ointment and oil of turpentine, and finiſh the cure with any drying ointment. Should the horſe be feveriſh from the pain, bleed him, give cooling glyſters, and treat him as we have directed in ſimple fevers. Scalds and burns, how treated.

The fire, ſuppoſed to be left in the part after injuries of this kind, is nothing more than the inflammation, which is the Obſervation.

the natural effect of such causes; so that the whimsical notions and conceits concerning fire remaining in the burnt part, is extremely absurd.

CHAP. XXVII.

Of ULCERS *in General.*

WE shall not here enter into a description of each particular species of ulcers, but only lay down some directions for their general treatment; by which means we shall avoid the usual prolixity of authors on this subject, and yet shall endeavour to give so general an idea of the nature of ulcers, as we hope will be sufficiently instructive both of the application, and of the proper remedy to each.

The cure of some ulcers in vain attempted without internals.

It may be necessary to observe, that we may often in vain pursue the best methods of cure by external applications, unless we have recourse to proper internal remedies; for as all ulcers, difficult to heal, proceed from a particular indisposition

ſition of the blood and juices, before the former can be brought into any order, the latter muſt be corrected by alteratives, and ſweetening medicines.

The firſt intention in the cure of ulcers, is bringing them to digeſt, or diſcharge a thick matter; which will, in general, be effected by the green ointment, or that with precipitate; but ſhould the ſore not digeſt kindly by theſe means, but diſcharge a gleety thin matter, and look pale, you muſt then have recourſe to warmer dreſſings, ſuch as balſam, or oil of turpentine, melted down with your common digeſtive, and the ſtrong-beer poultice over them: it is proper alſo in theſe kind of ſores, where the circulation is languid, and the natural heat abated, to warm the part, and quicken the motion of the blood, by fomenting it well at the time of dreſſing; which method will thicken the matter, and rouſe the native heat of the part, and then the former dreſſings may be re-applied. The general method of curing ulcers.

If the lips of the ulcer grow hard or callous, they muſt be pared down with a knife, and afterwards rubbed with the cauſtick.

Where

Ulcers with proud flesh.

Where soft fungous flesh begins to rise, it should carefully be suppressed in time, otherwise the cure will go on but slowly; if it has already sprouted above the surface, pare it down with a knife, and rub the remainder with a bit of caustick; and, to prevent its rising again, sprinkle the sore with equal parts of burnt alum, and red precipitate; or wash with the sublimate water, and dress with dry lint even to the surface, and then roll over a compress of linen as tight as can be borne; for a proper degree of pressure, with mild applications, will always oblige these spongy excrescences to subside, but without bandage the strongest will not so well succeed.

Hollow ulcers.

All sinusses, or cavities, should be laid open as soon as discovered, after bandages have been ineffectually tried; but where the cavity penetrates deep into the muscles, and a counter opening is impracticable or hazardous; where, by a continuance, the integuments of the muscles are constantly dripping and melting down: in these cases, injections may be used, and will frequently be attended with success. A decoction of colcothar boiled in forge-water, or solution of lapis medi-

medicamentoſus in lime-water, with a fifth part of honey and tincture of myrrh, may be firſt tried, injecting three or four ounces twice a day; or ſome reſin, melted down with oil of turpentine, may be uſed for this purpoſe: if theſe ſhould not ſucceed, the following, which is of a ſharp and cauſtic nature, is recommended on Mr. Gibſon's experience.

A drying injection.

TAKE of Roman vitriol, half an ounce: diſſolve in a pint of water, then decant and pour off gently into a large quart bottle: add half a pint of camphorated ſpirit of wine, the ſame quantity of the beſt vinegar, and two ounces of Ægyptiacum.

This mixture is alſo very ſucceſsfully applied to ulcerated greaſy heels, which it will both cleanſe and dry up.

Fiſtulous ulcers.

Theſe ſinuſſes, or cavities, frequently degenerate into *fiſtulæ*, that is, grow pipey, having the inſide thickened, and lined, as it were, with a horny callous ſubſtance. In order to their cure, they muſt be laid open, and the hard ſubſtance all cut away; where this is impracticable, ſcarify them well, and truſt to the precipitate medicine made ſtrong, rubbing now

now and then with cauſtick, butter of antimony, or equal parts of quickſilver and aqua fortis.

Ulcers with foul bones.

When a rotten or foul bone is an attendant on an ulcer, the fleſh is generally looſe and flabby, the diſcharge oily, thin, and ſtinking, and the bone diſcovered to be carious, by its feeling rough to the probe paſſed through the fleſh for that purpoſe. In order to a cure, the bone muſt be laid bare, that the rotten part of it be removed; for which purpoſe, deſtroy the looſe fleſh, and dreſs with dry lint; or the doſſils may be preſſed out of tincture of myrrh or euphorbium: the throwing off the ſcale is generally a work of nature, which is effected in more or leſs time, and in proportion to the depth the bone is affected; though burning the foul bone is thought by ſome to haſten its ſeparation.

What internals proper to correct the blood.

Where the cure does not properly ſucceed, mercurial phyſick ſhould be given, and repeated at proper intervals: and to correct and mend the blood and juices, the antimonial and alterative powders, with a decoction of guaiacum and lime-waters, are proper for that purpoſe. *Vide* Chapter on *Alteratives*.

This general method of treating ulcers or ſores, if properly attended to, will be found applicable to particular caſes; ſo that to avoid repetitions, we refer the reader to this chapter.

CHAP. XXVIII.

Of a BONE-SPAVIN.

WITHOUT entering at all into the cauſe of this diſorder, which is a bony excreſcence, or hard ſwelling, growing on the inſide of the hock of a horſe's leg, we ſhall content ourſelves with deſcribing the different kinds thereof, by their ſymptoms; and then enter on their cure. A ſpavin deſcribed.

A ſpavin, that begins on the lower part of the hock, is not ſo dangerous as that which puts out higher, between the two round proceſſes of the leg-bone; and a ſpavin near the edge is not ſo bad as that which is more inward towards the middle,

as it does not ſo much affect the bending of the hock.

The different kinds.

A ſpavin, that comes by a kick or blow, is at firſt no true ſpavin, but a bruiſe on the bone, or membrane which covers it; therefore not of that conſequence, as when it proceeds from a natural cauſe; and thoſe that put out on colts, and young horſes, are not ſo bad as thoſe that happen to horſes in their full ſtrength and maturity; but in very old horſes they are generally incurable.

Some proper cautions.

The uſual method of treating this diſorder, is by bliſters and firing, without any regard to the ſituation, or cauſe whence it proceeds. Thus, if a fulneſs on the fore part of the hock comes upon hard riding, or any other violence, which threatens a ſpavin; in that caſe, ſuch coolers and repellers are proper, as are recommended in ſtrains and bruiſes. Thoſe happening to colts and young horſes are generally ſuperficial, and require only the milder applications; for it is better to wear them down by degrees, than to remove them at once by ſevere means.

Various are the preſcriptions for the bliſter-

bliſtering ointment; but the following, on proper experience, ſtands well recommended by Mr. Gibſon.

TAKE nerve and marſh-mallow ointment, of each two ounces; quick-ſilver, one ounce, thoroughly broke, with an ounce of Venice turpentine; Spaniſh flies powdered, a dram and a half; ſublimate, one dram; oil of origanum, two drams. The bliſtering ointment.

The hair is to be cut as cloſe as poſſible, and then the ointment applied pretty thick over the part; this ſhould be done in the morning, and the horſe kept tied up all day without any litter till night; when he may be untied, in order to lie down; and a pitch or any ſticking plaiſter may be laid over it, and bound on with a broad tape or bandage, to keep all cloſe. How to be uſed.

After the bliſter has done running, and the ſcabs begin to dry and peel off, it may be applied a ſecond time, in the ſame manner as before; this ſecond application generally taking greater effect than the firſt, and in colts and young horſes makes a perfect cure. When renewed.

Obſervation.

When the ſpavin has been of long ſtanding, it will require to be renewed, perhaps, five or ſix times; but after the ſecond application, a greater diſtance of time muſt be allowed, otherwiſe it might leave a ſcar, or cauſe a baldneſs; to prevent which, once a fortnight or three weeks is often enough; and it may in this manner be continued ſix or ſeven times without the leaſt blemiſh, and will generally be attended with ſucceſs.

But the ſpavins that put out on older, or full-aged horſes, are apt to be more obſtinate, as being ſeated more inward; and when they run among the ſinuoſities of the joint, they are for the moſt part incurable, as they then lie out of the reach of applications, and are arrived to a degree of impenetrable hardneſs.

Some cautions in regard to firing and cauſticks.

The uſual method in theſe caſes is to fire directly, or to uſe the ſtrongeſt kind of cauſtic bliſters; and ſometimes to fire and lay the bliſter immediately over the part; but this way ſeldom ſucceeds farther, than putting a ſtop to the growth of the ſpavin, and is apt to leave both a blemiſh and ſtiffneſs behind; beſides the great riſk run (by applications of theſe fiery

fiery and cauſtic medicines to the nervous and tendinous parts about the joints) of exciting violent pain and anguiſh, and deſtroying the limb.

The beſt and ſafeſt way therefore, is to make trial of the bliſtering ointment above, and to continue it, according to the directions there laid down, for ſome months, if found neceſſary; the horſes in the intervals working moderately: the hardneſs will thus be diſſolved by degrees, and wear away inſenſibly. The bliſtering ointment recommended.

Where the ſpavin lies deep, and runs ſo far into the hollow of the joint, that no application can reach it, neither firing nor medicines can avail, for the reaſons above-mentioned; though bold ignorant fellows have ſometimes ſucceeded in caſes of this ſort (by men of judgement deemed incurable) by the application of cauſtic ointments with ſublimate, which act very forcibly, enter deep, and make a large diſcharge, and by that means deſtroy a great part of the ſubſtance, and diſſolve away the remainder. Though, whoever is at all acquainted with the nature of theſe medicines, muſt know how dangerous in general their operation is on theſe occaſions, and that a proper prepared Directions for firing.

cautery made like a fleam, under the direction of a ſkilful hand, may be applied with leſs danger of injuring either tendons or ligaments. After the ſubſtance of the ſwelling has been properly penetrated by the inſtrument, it muſt be kept running by the precipitate medicine, or mild bliſtering ointment. Where the ſpavin lies not deep in the joint, and the bliſtering method will not ſucceed, the ſwelling may be ſafely fired with a thin iron forced pretty deep into the ſubſtance, and then ſhould be dreſſed, as is above directed.

CHAP. XXIX.

Of a CURB *and* RING-BONE.

A curb described.

AS a ſpavin riſes among the bones on the forepart of the hock, ſo a curb takes its origin from the junctures of the ſame bones, and riſes on the hind part, forming a pretty large tumour over the back part of the hind leg, attended with ſtiffneſs, and ſometimes with pain and lameneſs.

A curb proceeds from the ſame cauſes that produce ſpavins, *viz.* hard riding, ſtrains, blows, or kicks. The cure at firſt is generally eaſy enough effected by bliſtering, repeated two or three times, or oftener. If it does not ſubmit to this treatment, but grows exceſſively hard, the quickeſt and ſureſt way is to fire with a thin iron, making a line down the middle from top to bottom, and drawing ſeveral lines in a penniform manner pretty deep; and then to apply a mild bliſtering plaiſter or ointment over it.—This method will entirely remove it. How cured.

There is another ſwelling taken notice of, on the outſide of the hock, which is called a *Jardon*. This commonly proceeds from blows and kicks of other horſes; but frequently happens to managed horſes, by ſetting them on their haunches: it is ſeldom attended with much lameneſs, unleſs it has been neglected, or ſome little proceſs of the bone be broke. It ſhould firſt be treated with the coolers and repellers in page 273, and 274: but if any ſwelling continues hard, and inſenſible, the beſt way is to bliſter or fire; but mild bliſters alone generally ſucceed. A jardon deſcribed.

A ring-bone described.

The ring-bone is a hard ſwelling on the lower part of the paſtern, which generally reaches half way round the fore-part thereof, and from its reſemblance to a ring, has its denomination. It often ariſes from ſtrains, *&c.* and when behind, from putting young horſes too early upon their haunches; for in that attitude a horſe throws his whole weight as much, if not more, upon his paſterns, than on his hocks.

Their difference.

When it appears diſtinctly round the paſtern, and does not run downwards toward the coronet, ſo as to affect the coffin-joint, it is eaſily cured; but if it takes its origin from ſome ſtrain or defect in the joint originally, or if a calloſity is found under the round ligament that covers that joint, the cure is generally dubious, and ſometimes impracticable; as it is apt to turn to a quittor, and in the end to form an ulcer upon the hoof.

The ring-bones that appear on colts and young horſes, will often inſenſibly wear off of themſelves without the help of any application; but when the ſubſtance remains, there needs no other remedy

remedy beſides bliſtering, unleſs, when by long continuance, it is grown to an obſtinate hardneſs, and then it may require both bliſtering and firing.

To fire a ring-bone ſucceſsfully, let the operation be performed with a thinner inſtrument than the common one, and let the lines or razes be made not above a quarter of an inch diſtant, croſsing them obliquely, ſomewhat like a chain: apply a mild bliſter over all, and when quite dried up, the rupture plaiſter; and then turn the horſe to graſs for ſome time. The cure.

CHAP. XXX.

Of SPLENTS.

THESE are hard excreſcences that grow on the ſhank-bone, and are of various ſhapes and ſizes. Some horſes are more ſubject to ſplents than others; but young horſes are moſt liable to theſe infirmities, which often wear off, and diſappear Splents deſcribed.

diſappear of themſelves. Few horſes put out ſplents after they are ſeven or eight years old, unleſs they meet with blows or accidents.

A ſplent that ariſes in the middle of the ſhank bone is no ways dangerous; but thoſe that ariſe on the back part of this bone, when they grow large and preſs againſt the back ſinue, always cauſe lameneſs or ſtiffneſs, by rubbing againſt it: the others, except they are ſituated near the joints, ſeldom occaſion lameneſs.

Beſt let alone, if they occaſion no lameneſs.

As to the cure of ſplents, the beſt way is not to meddle with them, unleſs they are ſo large as to diſfigure a horſe, or are ſo ſituated as to endanger his going lame.

The cure ingeneral.

Splents in their infancy, and on their firſt appearance, ſhould be well bathed with vinegar or old verjuice; which, by ſtrengthening the fibres, often put a ſtop to their growth: for the membrane covering the bone, and not the bone itſelf, is here thickened: and in ſome conſtitutions purging, and afterwards diuretic drinks, will be a great means to remove the humidity and moiſture about the

the limbs, which is what often gives riſe to ſuch excreſcences.

Various are the remedies preſcribed for this diſorder; the uſual way is to rub the ſplent with a round ſtick, or the handle of a hammer, till it is almoſt raw, and then touch with oil of origanum. Others lay on a pitch plaiſter, with a little ſublimate, or arſenick, to deſtroy the ſubſtance: ſome uſe oil of vitriol; ſome tincture of cantharides: all which methods have at times ſucceeded; only they are apt to leave a ſcar with the loſs of hair. Thoſe applications that are of a more cauſtic nature, often do more hurt than good, eſpecially when the ſplent is grown very hard, as they produce a rottenneſs, which keeps running ſeveral months before the ulcer can be healed, and then leaves an ugly ſcar. Various remedies for this purpoſe.

Mild bliſters often repeated, as recommended in the chapter of *Bone-Spavin*, ſhould firſt be tried as the moſt eligible method, and will generally ſucceed, even beyond expectation: but if they fail, and the ſplent be near the knee or joints, you muſt fire and bliſter in the ſame manner as for the bone-ſpavin. Mild bliſters are to be preferred to firing.

Splents

When firing is neceſſary.

Splents on the back part of the ſhank-bone are difficult to cure, by reaſon of the back ſinews covering them; the beſt way is to bore the ſplent in ſeveral places with an iron not very hot; and then to fire in the common way, not making the lines too deep, but very cloſe together.

CHAP. XXXI.

Of the POLL-EVIL.

The poll-evil deſcribed.

THE poll-evil is an abſceſs near the poll of a horſe, formed in the ſinuſſes between the noll-bone, and the uppermoſt vertebræ of the neck.

How cured.

If it proceeds from blows, bruiſes, or any external violence, at firſt bathe the ſwelling often with hot vinegar; and if the hair be fretted off with an ouzing through the ſkin, make uſe of two parts of vinegar, and one of ſpirit of wine; but if there be an itching, with heat and inflam-

inflammation, the safest way is to bleed, and apply poultices with bread, milk, and elder flowers: this method, with the assistance of physick, will frequently disperse the swelling, and prevent this evil.

How treated, when critical.

But when the tumour is critical, and has all the signs of matter, the best method then is to forward it, by applying the ripening poultices already taken notice of, till it comes to maturity, and bursts of itself; or if opened with a knife, great care should be taken to avoid the tendinous ligament that runs along the neck under the mane: when mater is on both sides, the opening must be made on each side, and the ligament remain undivided.

Various methods of cure.

If the matter flows in great quantities, resembles melted glue, and is of an oily consistence, it will require a second incision, especially if any cavities are discovered by the finger or probe; these should be opened by the knife, the orifices made depending, and the wound dressed with the common digestive of turpentine, honey, and tincture of myrrh, and after digestion, with the precipitate ointment; or wash the sore with the following,

lowing, made hot, and fill up the cavity with tow ſoaked in it.

A drying waſh.

TAKE vinegar, or ſpirit of wine, half a pint; white vitriol diſſolved in ſpring water, half an ounce; tincture of myrrh, four ounces.

This may be made ſharper, by adding more vitriol; but if the fleſh is very luxuriant, it ſhould firſt be pared down with a knife before the application: with this waſh alone Mr. Gibſon has cured this diſorder, without any other formality of dreſſing, waſhing with it twice a day, and laying over the part a quantity of tow ſoaked in vinegar, and the white of eggs beat together. This laſt application will ſerve inſtead of a bandage, as it will adhere cloſe to the poll, and come off eaſy when there is occaſion to dreſs. Some waſh with the phagedænic water, and then fill up the abſceſs with looſe doſſils of tow ſoaked in Ægyptiacum and oil of turpentine made hot, and continue this method till the cure is effected.

But the moſt compendious method of cure, is found by obſervation to be by ſcalding, as the farriers term it, and is thus proſecuted when the ſore is foul, of a bad

a bad diſpoſition, and attended with a profuſion of matter.

The ſcalding mixture.

TAKE corroſive ſublimate, verdigreaſe in fine powder, and Roman vitrol, of each two drams; green copperas, half an ounce; honey or Ægyptiacum, two ounces; oil of turpentine and train oil, of each eight ounces; rectified ſpirit of wine, four ounces: mix together in a bottle.

Some make their ſcalding mixture milder, uſing red precipitate inſtead of the ſublimate; and white vitriol inſtead of the blue. The following has been ſucceſsfully uſed for this purpoſe, *viz.* half an ounce of verdigreaſe, half a pint of train oil, four ounces of oil of turpentine, and two of oil of vitriol.

The method of ſcalding.

The manner of ſcalding is firſt to clean the abſceſs well with a piece of ſponge dipped in vinegar; then put a ſufficient quantity of the mixture into a ladle with a ſpout, and when it is made ſcalding hot, pour it into the abſceſs, and cloſe the lips together with one or more ſtiches. This is to remain in ſeveral days, and if good matter appears, and not in an over-

great

great quantity, it will do well without any other dreſſing, than bathing with ſpirit of wine; if the matter flows in great abundance, and of a thin conſiſtence, it muſt be ſcalded again, and repeated till the matter leſſens and thickens.

Obſervation. Theſe liquid corroſive dreſſings agree well with horſes, whoſe fibres are ſtiff and rigid, and whoſe juices are oily and viſcid; in this caſe they contract the veſſels of the tendons on the hind part of the head and upper part of the neck, which are continually ſpewing out a matter or ichor that can hardly be digeſted, or the profuſion abated without ſuch applications as theſe.

CHAP. XXXII.

Of a Fiſtula *and* Bruiſes *on the* Withers, Warbles *on the* Back, *and* Sit-Faſts.

Bruiſes of the withers, how cauſed. BRUISES on the withers frequently impoſthumate, and for want of care turn fiſtulous; they ariſe often from pinches

pinches of the ſaddle, and ſhould be treated with repellers; for this purpoſe bathe the tumour well with hot vinegar three or four times a day; if that does not ſucceed alone, an ounce of oil of vitriol may be put to a quart of vinegar, or half an ounce of white vitriol diſſolved in a little water, and added to the ſame quantity. Theſe are generally very effectual repellers for this purpoſe in horſes, and will frequently prevent impoſthumation: when the ſwelling is attended with heat, ſmarting, and little hot watery pimples, the following mixture will then be more proper to bathe with. The cure.

TAKE two ounces of crude ſal Ammoniac, boiled in a quart of lime-water; where that cannot be had, a handful of pearl or wood-aſhes may be boiled in common water; pour off the decoction when ſettled, and mix with it half a pint of ſpirit of wine: anoint the part afterwards with linſeed oil, or elder ointment, to ſoften and ſmooth the ſkin. A repelling waſh.

But when theſe ſwellings are critical, the conſequence of a fever ſettled on this part, you muſt avoid the repelling method, and aſſiſt in bringing the ſwelling When critical, how treated.

to matter, by means of ſuppurating poultices: experienced farriers adviſe, never to open theſe tumours till they break of themſelves: for if they are opened before they are ripe, the whole ſore will be ſpongy, and diſcharge a bloody ichor, which ſoon degenerates into a ſordid ulcer. But take care to enlarge the openings, and pare away the lips, that your dreſſings may be applied eaſily; and avoid the ligament which runs along the neck to the withers: if a gathering forms on the oppoſite ſide, open it in the ſame manner, but take care they incline downwards, for the ſake of depending orifices, and letting the matter flow off eaſily. For the method of dreſſing, we muſt refer to the preceding chapter: and if the bones ſhould be found foul, they muſt be dreſſed with tincture of myrrh till they ſcale off: if the fungus is very troubleſome, and the diſcharge oily, yellow and viſcid; pledgets ſoaked in the following, made hot, have been found very effectual, bathing the ſwelling round with ſpirits of wine and vinegar.

A drying waſh.

TAKE half an ounce of blue vitriol, diſſolved in a pint of water: oil of turpentine, and rectified ſpirit of wine,

wine, of each four ounces; white wine vinegar, ſix ounces; oil of virtriol and Ægyptiacum, of each two ounces.

Theſe ſharp liquid applications are often found more efficacious dreſſings than ointments with precipitate, or verdigreaſe, or indeed any other digeſtives; as they inſinuate themſelves more readily into the interſtices of the fungæ, or little quag holes, ſo commonly obſerved in theſe kind of ulcers; and at the ſame time level and deſtroy the riſing, and exuberant pupillæ; whereby the ulcer grows more ſmooth and dry, ſoon heals up, and cicatriſes. Obſervation.

When the cavities are truly fiſtulous, the calloſities muſt be cut out, where it can be done, with a knife; and the remainder deſtroyed by corroſives, *viz.* precipitate, burnt alum and white vitriol, as we have already obſerved in the chapter on *Ulcers*.

Warbles are ſmall hard tumours under the ſaddle part of the horſes's back, occaſioned by the heat of the ſaddle in travelling, or its uneaſy ſituation. A hot greaſy diſh-clout at firſt frequently ap- Warbles deſcribed.

plied, will ſometimes remove them. Camphorated ſpirits of wine are alſo very effectual for this purpoſe to diſperſe them, to which a little ſpirit of ſal Ammoniac may be added. The repellers above-mentioned are ſucceſsfully applied in theſe caſes, and if you are obliged to work the horſe, take care your ſaddle is nicely chambered.

A fit-faſt, what.

A *fit-faſt* proceeds generally from a warble, and is the horſe's hide turned horny, which, if it cannot be diſſolved and ſoftened, by rubbing with the mercurial ointment, muſt be cut out, and treated then as a freſh wound.

CHAP. XXXIII.

Of Wind-Galls, Blood, *and* Bog-Spavins.

Wind-galls deſcribed.

A *Wind-Gall* is a flatulent ſwelling, which yields to the preſſure of the finger, and recovers its ſhape on the removal thereof: the tumour is viſible to the eye, and often ſeated on both ſides

of the back ſinew, above the fetlocks on the fore legs; but moſt frequently on the hind legs; though they are met with in various parts of the body, wherever membranes can be ſo ſeparated, that a quantity of air and ſeroſities may be included within their duplicatures.

How cauſed.

When they appear near the joints and tendons, they are generally cauſed by ſtrains or bruiſes on the ſinews, or the ſheath that covers them; which by being overſtreched, have ſome of their fibres ruptured; whence probably may ouze out that fluid which is commonly found with the included air: though where theſe ſwellings ſhew themſelves in the interſtices of large muſcles, which appear blown up like bladders, air alone is the chief fluid; and theſe may ſafely be opened, and treated as a common wound.

How they ſhould be treated.

On the firſt appearance of wind-galls, their cure ſhould be attempted by reſtringents and bandage; for which purpoſe, let the ſwelling be bathed twice a day with vinegar, or verjuice alone, or let the part be fomented with a decoction of oak-bark, pomegranate, and alum boiled in verjuice; binding over it, with a roller, a woollen cloth ſoaked in the ſame.

Some for this purpoſe uſe red wine lees, others curriers ſhavings wetted with the ſame, or vinegar, bracing the part up with a firm bandage.

Repeated bliſtering recommended.

If this method, after a proper trial, ſhould not be found to ſucceed, authors have adviſed the ſwelling to be pierced with an awl, or opened with a knife; but mild bliſtering has in general the preference given to theſe methods; the including fluids being thereby drawn off, the impacted air diſperſed, and the tumour gradually diminiſhed. A little of the bliſtering ointment ſhould be laid on every other day for a week, which brings on a plentiful diſcharge, but generally in a few days is dried up, when the horſe may be put to his uſual work; and the biſtering ointment renewed in that manner once a month, or oftener, as the horſe can be ſpared from buſineſs, till the cure is compleated. This is the only method to prevent ſcars, which firing of courſe leaves behind, and unleſs ſkilfully executed, too often likewiſe a fullneſs on the joint, with ſtiffneſs: the mild bliſtering ointment, where the ſublimate is left out, is the propereſt for this purpoſe.

A *blood-*

A *blood-ſpavin* is a ſwelling and dilatation of the vein that runs along the inſide of the hough, forming a little ſoft ſwelling in the hollow part, and is often attended with a weakneſs and lameneſs of the hough. A blood-ſpavin deſcribed.

The cure ſhould be firſt attempted with the reſtringents and bandage above recommended, which will contribute greatly to ſtrengthen all weakneſſes of the joints, and frequently will remove this diſorder, if early applied; but if, by theſe means the vein is not reduced to its uſual dimenſions, the ſkin ſhould be opened, and the vein tied with a crooked needle and wax-thread paſſed underneath it, both above and below the ſwelling, and the turgid part ſuffered to digeſt away with the ligatures: for this purpoſe, the wound may be daily dreſſed with turpentine, honey, and ſpirit of wine, incorporated together. The cure.

A *bog-ſpavin* is an incyſted tumour on the inſide the hough, or, according to Dr. Bracken, a collection of browniſh gelatinous matter, contained in a bag, or cyſt, which he thinks to be the lubricating matter of the joint altered, the A bog-ſpavin deſcribed.

common membrane that incloſes it, forming the cyſt: this caſe he has taken the pains to illuſtrate in a young colt of his own, where he ſays, when the ſpavin was preſſed hard on the inſide the hough, there was a ſmall tumour on the outſide, which convinced him the fluid was within-ſide the joint: he accordingly cut into it, diſcharged a large quantity of this gelatinous matter, dreſſed the ſore with doſſils dipped in oil of turpentine, putting into it, once in three or four days, a powder made of calcined vitriol, alum, and bole: by this method of dreſſing, the bag ſloughed off, and came away, and the cure was ſucceſsfully compleated without any viſible ſcar.

The operation and cure.

This diſorder, according to the above deſcription, will ſcarcely ſubmit to any other method except firing, when the cyſt ought to be penetrated to make it effectual; but in all obſtinate caſes that have reſiſted the above methods, both the cure of this, and the ſwellings called wind-galls, ſhould, I think be attempted in this manner. If, through the pain attending the opperation or dreſſings, the joint ſhould ſwell and inflame, foment it twice a day, and apply a poultice over the dreſſings till it is reduced.

Recommended in obſtinate wind-galls.

CHAP.

CHAP. XXXIV.

Of Mallenders *and* Sallenders.

MAllenders are cracks in the bend of the horſe's knee, that diſcharge a ſharpe indigeſted matter; they are often the occaſion of lameneſs, ſtiffneſs, and the horſe's ſtumbling. Mallenders deſcribed.

Sallenders are the ſame diſtemper, ſituate on the bending of the hough, and occaſion a lameneſs behind. Sallenders what.

They are both cured by waſhing the parts with a lather of ſoap warmed, or old chamber-lye; and then applying over the cracks a ſtrong mercurial ointment ſpread on tow, with which they ſhould be dreſſed, night and morning, till all the ſcabs fall off; if this ſhould not ſucceed, anoint them night and morning with a little of the following, and apply the above ointment over it. How cured.

TAKE hogs-lard, two ounces; ſublimate mercury, two drams. An ointment for that purpoſe.

Or,

Or,

TAKE hogs-lard, two ounces; oil of vitriol, two drams.

Take the next from Gibſon, which is to be depended on.

Another. Æthiop's mineral, half an ounce; white vitriol, one dram; ſoft green ſoap, ſix ounces.

Anoint with this often, but firſt clip away the hair, and clear the ſcabs. On their drying up, it may be proper to give a gentle purge or two; or the nitre balls may be taken advantageouſly, for a fortnight or three weeks.

CHAP. XXXV.

Of Lampas, Barbs, *and* Wolves Teeth.

The lampas deſcribed. THE *lampas* is an excreſcence in the roof of the horſe's mouth, which is ſometimes ſo luxuriant, that it grows above the teeth, and hinders his feeding.

The

The cure is in lightly cauteriſing the fleſh with a hot iron, taking care that it does not penetrate too deep, ſo as to ſcale off the thin bone that lies under the upper bars; the part may be anointed with burnt alum and honey, which is proper for moſt ſores in the mouth.

This operation is by ſome thought to be entirely unneceſſary; it being a general obſervation with them, that all young horſes have their mouths more or leſs full of what are called lampas; and that ſometimes they riſe higher than the fore-teeth: but they further obſerve, in proportion as a horſe grows older, the roof flattens of itſelf, and the teeth then appear to riſe. We are obliged to the ingenious M. La Foſſe for this remark, and hope it will be the means of aboliſhing this cruel and unneceſſary operation. Obſervation.

Barbs are ſmall excreſcences under the tongue, which may be diſcovered by drawing it aſide, and are cured by cutting cloſe off, and waſhing with brandy, or ſalt and water. Barbs what, and how cured.

A horſe is ſaid to have *wolves teeth*, when the teeth grow in ſuch a manner, that their points prick or wound either the Wolves teeth, what.

the tongue, or gums, in eating. Old horſes are moſt liable to this infirmity, and whoſe upper overſhoot the under teeth in a great degree.

The cure. To remedy this evil, you may either chop off the ſuperfluous parts of the teeth with a chiſel and mallet, or file them down, which is the better way, till you have ſufficiently waſted them.

CHAP. XXXVI.

Of the GREASE.

The greaſe to be conſidered as a diſorder of the veſſels as well as the blood.

IN order to treat this diſorder with ſome propriety (without having recourſe to *humours* falling down for its explanation) I ſhall conſider it as ariſing from two different cauſes; a fault or relaxation in the veſſels, or a bad diſpoſition in the blood and juices; but unleſs the reader has ſome idea of the blood's circulation, or will give himſelf a little trouble to obtain it, this doctrine will be of little uſe to him, and he muſt be content to be ſtill impoſed on with the uſual cant

cant of *humours*. We have already explained our meaning on this subject in a preceding chapter, and shall here only observe, that the blood and juices (or *humours*, for there are always some in the best state of blood) are brought to the extreme parts by the arteries, and returned by the veins; in which latter, the blood is to rise in perpendicular columns, to return the circulating fluids from the extremities: hence swellings in the legs of horses may easily be accounted for, from a partial stagnation of the blood and juices in the finer vessels, where the circulation is most languid; and especially when there is want of due exercise, and a proper muscular compression on the vessels, to push forward the returning blood, and propel the inert and half stagnating fluids through their vessels; in short, the blood in such cases cannot so readily ascend as descend, or a greater quantity is brought by the arteries than can be returned by the veins.

How swellings in the limbs are occasioned.

The grease then, considered in this light, must be treated as a local complaint, where the parts affected are alone concerned, the blood and juices being yet untainted, and in good condition; or as a disorder where they are both complicated:

The grease should sometimes be treated as local.

plicated: but when it is an attendant on ſome other diſtemper, as the farcy, yellows, dropſy, *&c.* ſuch diſeaſes muſt firſt be cured before the greaſe can be removed. In the former caſe, moderate exerciſe, proper dreſſing, cleanlineſs, and external application, will anſwer the purpoſe; in the latter, internals muſt be called in to our aſſiſtance, with proper evacuations.

How ſwelled heels ſhould be treated.

When a horſe's heels are firſt obſerved to ſwell in the ſtable, and ſubſide, or go down, on exerciſe; let care be taken to waſh them very clean, every time he comes in, with ſoap-ſuds, chamber-lye, or vinegar and water, which with proper rubbing will frequently prevent, or remove this complaint: or let them be well bathed twice a day with old verjuice, or the following mixture, which will brace up the relaxed veſſels; and if rags dipped in the ſame are rolled on, with a proper bandage, for a few days, it is moſt likely the ſwellings will ſoon be removed by this method only, as the bandage will ſupport the veſſels, till they have recovered their tone. To anſwer this end alſo, a laced ſtocking made of ſtrong canvas, or coarſe cloth, neatly fitted to the part, would be found extremely

Bandage recommended,

tremely ſerviceable, and might eaſily be contrived by an ingenious mechanick.

A repelling waſh.

TAKE rectified ſpirit of wine, four ounces; diſſolve in it half an ounce of camphor, to which add wine-vinegar, or old verjuice, ſix ounces; white vitriol diſſolved in a gill of water, one ounce: mix together, and ſhake the phial when uſed.

Cracks how treated.

But if cracks or ſcratches are obſerved, which ouſe and run, let the hair be clipped away, as well to prevent a lodgement (which becomes ſtinking and offenſive by its ſtay) as to give room for waſhing out dirt or gravel, which, if ſuffered to remain there, would greatly aggravate the diſorder.

Poultices often neceſſary.

When this is the caſe, or the heels are full of hard ſcabs, it is neceſſary to begin the cure with poultices, made either of boiled turnips and lard, with a handful of linſeed powdered; or oatmeal and rye-flower, with a little common turpentine, and hogs-lard, boiled up with ſtrong beer grounds, or red wine lees. The digeſtive ointment being applied to the ſores for two or three days, with either of theſe poultices over it, will, by

ſoftening

ſoftening them, promote a diſcharge, unload the veſſels, and take down the ſwelling; when they may be dried up with the following.

A drying water.

TAKE white vitriol and burnt alum, of each two ounces; Ægyptiacum, one ounce; lime-water, a quart or three pints: waſh the ſores with a ſponge dipped in this, three times a day, and apply the common white ointment ſpread on tow; to an ounce of which may be added two drams of ſugar of lead.

Or the following waſh and ointment may be uſed for that purpoſe.

Another drying water.

TAKE half an ounce of Roman vitriol, diſſolve it in a pint of water; then decant off the clear into a quart bottle, add half a pint of camphorated ſpirits of wine, the ſame quantity of vinegar, and two ounces of Ægyptiacum.

A drying ointment.

TAKE honey four ounces; white or red lead powdered, two ounces; verdigreaſe, in fine powder, one ounce: mix together.

Some

Some for this purpoſe apply alum-curd; others a ſtrong ſolution of alum in verjuice, with honey; and many of theſe forms may eaſily be contrived. But let it be remembered, that as ſoon as the ſwelling is abated, and the moiſture leſſened, it would be very proper to keep the legs and paſterns rolled up with a firm bandage, or linen roller, two or three fingers wide, in order to brace up the relaxed veſſels, till they have recovered their natural tone. Other forms.

This method is generally very ſucceſsful, when the diſtemper is only local, and requires no internal medicines; but if the horſe be full and groſs, his legs greatly gorged, ſo that the hair ſtares up, and is what ſome term *pen-feathered*, and has a large ſtinking diſcharge from deep foul ſores, you may expect to meet with great trouble, as theſe diſorders are very obſtinate to remove, being often occaſioned by a poor dropſical ſtate of blood, or a general bad diſpoſition in the blood and juices. How treated when from an internal cauſe.

The cure in this caſe, if the horſe is full and fleſhy, muſt be begun by bleeding, rowels, and repeated purging; after

which, diuretic medicines are frequently given with ſucceſs. Thus,

A diuretic drink.

TAKE four ounces of yellow roſin, one of ſal prunellæ; grind them together with an oiled peſtle, add a dram of oil of amper, and give a quart of forge-water every morning faſting two hours before and after taking, and ride moderately.

Nitre recommended.

As this drink is found very diſagreeable to ſome horſes, I would recommend the nitre balls in its ſtead, given to the quantity of two ounces a day, for a month or ſix weeks, mixed up with honey, or in his feeds: take the following alſo for that purpoſe.

Diuretic balls.

Yellow roſin, four ounces; ſalt of tartar, and ſal prunellæ, of each two ounces; Venice ſoap half a pound; oil of juniper, half an ounce: make into balls of two ounce weight, and give one every morning.

Or,

TAKE nitre, two ounces; camphor, one dram: honey enough to make into a ball: give as the former.

The

The legs, in this caſe, ſhould be bathed or fomented, in order to breathe out the ſtagnant juices, or to thin them, ſo that they may be able to circulate freely in the common current. For this purpoſe, foment twice a day with the diſcutient fomentation, p. 237, in which a handful or two of wood-aſhes has been boiled; apply then the above poultices, or the following, till the ſwelling has ſubſided, when the ſores may be dreſſed with the green ointment till they are properly digeſted, and then dried up with the water and ointment above recommended. Fomentations ſometimes neceſſary.

TAKE honey, one pound; turpentine, ſix ounces; incorporate with a ſpoon; and add of the meal of fenugreek and linſeed, each four ounces; boil in three quarts of red wine lees to the conſiſtence of a poultice; to which add, when taken from the fire, two ounces of camphor in powder: ſpread it on thick cloths, and apply warm to the legs, ſecuring it on with a ſtrong roller. A diſcutient poultice.

If the ſores are very foul, dreſs them with two parts of the wound ointment, and one of Ægyptiacum; and apply the

following, spread on thick cloths, and rolled on.

A cleansing poultice.

TAKE of black soap, one pound; honey, half a pound; burnt alum, four ounces; verdigrease powdered, two ounces; wheat-flour, a sufficient quantity.

When alteratives are necessary.

If the diuretic balls should not succeed, they must be changed for the antimonial and mercurial alteratives, already mentioned; but turning a horse out in a field, where he has a hovel or shed to run to at pleasure, would greatly contribute to quicken the cure, and indeed would in general effect it alone; but if this cannot be complied with, let him be turned out in the day-time.

A large stall necessary.

If the horse is not turned out, a large and convenient stall is absolutely necessary, with good dressing and care: this stall should be six feet wide, that a tall horse may shoot out his legs at length, so that the blood may circulate freely, without meeting with resistance, which it naturally must, when a horse lies all on a heap, or with his legs under him: nor should the stable be paved with too great a declivity; for if the horse stands too

too low with his hind legs, moſt of his weight will reſt upon them, and give him the greaſe, eſpecially if he is at all inclined to be gourdy.

A horſe lying down, of great ſervice.

The laſt thing we ſhall recommend, is a method to oblige a horſe to lay down in the ſtable. This undoubtedly is of the utmoſt conſequence, as it will not a little contribute to the removal and cure of this diſorder; for by only changing the poſitions of his legs, a freer circulation would be obtained, and the ſwelling taken down: whereas, in general, it is greatly aggravated by the obſtinacy of the horſe, who refuſes to lie down at all (probably from the pain it gives him to bend his legs for that purpoſe) by which means the ſtiffneſs and ſwelling increaſes, till the over-gorged and diſtended veſſels are obliged to give way, and by burſting, diſcharge the fluids, which ſhould circulate through them.

How to make him lay down.

The method propoſed by Dr. Bracken, is to tie up one of his fore-feet cloſe, and to faſten a cord, or ſmall rope about the other fetlock, bringing the end of it over the horſe's ſhoulders; then let him be hit or kicked with your foot behind that knee, at the ſame time pulling his

noſe down ſtrongly to the manger, you will bring him upon his knees, where he ſhould be held till he is tired, which cannot be long; but if he does not lie down ſoon, let him be thruſt ſideways againſt his quarters to throw him over: by forcing him down ſeveral times in this way you may teach him to lie down at the ſame words you firſt uſed for that purpoſe.——Other means are recommended for this purpoſe, ſuch as tying the horſe's tail with a cord, touching his ſkin with oil of vitriol, *&c.*

Thus have I endeavoured to diſtinguiſh this diſorder, and to point out when and where internals are neceſſary, and in what caſes the cure may be effected by external applications only.

CHAP. XXXVII.

Of Scratches, Crown-Scabs, Rat-tails *and* Capellets.

SCratches in the heels have ſo much affinity with the greaſe, and are ſo often concomitants of that diſtemper, that the method of treating them may be ſelected

ſelected chiefly from the preceding chapter; which at firſt ſhould be by the linſeed and turnep poultice, with a little common turpentine to ſoften them, and relax the veſſels; the green ointment may then be applied for a few day to promote a diſcharge, when they may be dried up with the ointments and waſhes recommended in the above chapter. It is beſt afterwards to keep the heels ſupple, and ſoftened with curriers dubbing, which is made of oil and tallow. This will keep the hide from cracking, and be as good a preſervative as it is to leather; and by uſing it often before exerciſe, will prevent the ſcratches, if care is taken to waſh the heels with warm water when the horſe comes in. When they prove obſtinate, and the ſores are deep, uſe the following; but if any cavities or hollow places are formed, they ſhould firſt be laid open, for no foundation can be laid for healing, till you can dreſs to the bottom.

Scratches how treated.

TAKE Venice turpentine, four ounces; quickſilver, one ounce; incorporate well together by rubbing ſome time, and then add honey and ſheep's-ſuet, of each two ounces.

An ointment for obſtinate ſcratches.

Anoint with this once or twice a day; and if the horſe is full or fleſhy, you muſt bleed and purge; and if the blood is in a bad ſtate, the alteratives muſt be given to rectify it.

The crown-ſcab, how treated.

The crown-ſcab is an humour that breaks out round the coronet, which is very ſharp and itching, and attended with a ſcurfineſs: ſharp waters prepared with vitriol are generally uſed for the cure; but the ſafeſt way is firſt to mix marſh-mallow and yellow baſilicon, or the wound-ointment, equal parts, and to ſpread them on tow, and lay all round the coronet. A doſe or two of phyſick may be very proper, with the diuretic drinks, p. 290, and the alteratives above recommended, in rebellious caſes. *Vide* Chapter on *Alteratives.*

Rat-tails what, and howcured.

Rat-tails are excreſcences, which creep from the paſtern to the middle of the ſhanks, and are ſo called from the reſemblance they bear to the tail of a rat. Some are moiſt, others dry; the former may be treated with the drying ointment and waſhes, p. 288. the latter with the mercurial ointment, p. 99. If the hardneſs does not ſubmit to the laſt medicine, it

it ſhould be pared off with a knife, and dreſſed with turpentine, tar and honey, to which verdigreaſe or white vitriol may occaſionally be added; but before the uſe of the knife, you may apply this ointment.

TAKE black ſoap, four ounces; quick lime, two ounces; vinegar enough to make an ointment. An ointment for rat-tails.

There are particular ſwellings which horſes are ſubject to, of a wenny nature, which grow on the heel of the hock, and on the point of the elbow, and are called by the French and Italians *Capellets:* they ariſe often from bruiſes and other accidents; and when this is the caſe, ſhould be treated with vinegar and other repellers; but when they grow gradually on both heels, or elbows, we may then ſuſpect the blood and juices in fault; that ſome of the veſſels are broke, and juices extravaſated; in this caſe, the ſuppuration ſhould be promoted, by rubbing the part with marſh-mallow ointment, and when matter is formed, the ſkin ſhould be opened with a lancet, in ſome dependent part towards one ſide, to avoid a ſcar: the dreſſings may be turpentine, honey, and tincture of myrrh. The relaxed Capellets what, and how to be treated.

laxed ſkin may be bathed with equal parts of ſpirit of wine and vinegar, to which an eighth part of oil of vitriol may be added. The contents of theſe tumours are various, ſometimes watery, at others ſuety, or like thick paſte; which, if care be not taken to digeſt out properly with the cyſt, will frequently collect again: was it not for the disfigurement, the ſhorteſt method would be to extirpate them with a knife, which, if artfully executed, and the ſkin properly preſerved, would leave very little deformity.

When theſe tumours proceed from an indiſpoſition of the blood, they are beſt let alone, eſpecially thoſe of the watery kind, which will often wear off inſenſibly without any applications; but when they are like to prove tedious, endeavour to diſperſe them by bathing with repellers, and have recourſe to rowels, purges, and diuretic medicines, to carry off the ſuperfluous juices, and correct the blood.

CHAP.

CHAP. XXXVIII.

Of the Diſeaſes of the FEET.

Of Narrow Heels, *and* Binding *of the* Hoof, *&c.*

Narrow heels often ruined by bad ſhoeing.

THOUGH narrow heels in general ariſe from a natural defect, yet they are often rendered incurable by bad ſhoeing; for ſome farriers hollow the quarters ſo deep and thin, that they may be pinched in with the fingers, and think by that method to widen them out by a ſtrong broad-webbed ſhoe; but this turns them narrow above, wires their heels, and dries, or rots the frog. The beſt way in all ſuch caſes is not to hollow the foot in ſhoeing, and to pare nothing out, but what is rotten or foul, if the foot be hard and dry, or inclined to be rotten, bathe it often with chamber-lye, or boil two pounds of linſeed bruiſed in two quarts of the ſame, to the conſiſtence of a poultice, then add ſix ounces of ſoft green ſoap, and anoint the foot with it every day, rubbing a little of it upon the ſole.

How they ſhould be managed.

Or,

Or,

An ointment for the hoofs.

TAKE bees-wax, two ounces; freſh butter, or lard, ſix ounces; tar, one ounce; as much linſeed, or neats-foot oil, as will make it the conſiſtence of a ſmooth ointment.

How dry hoofs ſhould be treated.

The hoofs, if too dry, may be anointed with the above, or with lard only; ſome for this purpoſe uſe tar, tallow, and honey, but moſt greaſy and unctuous applications will anſwer this intention: the feet alſo, if too dry, may be ſtuffed with bran and lard heated, or worked up together in the hand; which is very proper alſo to apply every night, when your horſe is travelling, in hot weather, on roads that are dry and hard; cow-dung likewiſe is a proper ſtuffing for the feet, but vinegar ſhould cautiouſly be mixed with it; for though it is a known cooler, it is a remarkable reſtringent, which in this caſe would be extremely prejudicial; inſtead of which, a pint of freſh butter may be firſt applied to the ſole, and the cow-dung laid over it.

How moiſt hoofs ſhould be treated.

There is another diſorder the hoofs are ſubject to, which is their being too ſoft and moiſt; this may be conſtitutional, or

or proceed from going much in wet and marſhy grounds, ſtanding conſtantly in wet litter, or any infirmity that may bring too great a moiſture into the feet. In this caſe, the horſe's hoofs may be bathed every day with warm vinegar, verjuice, copperas-water, and ſuch like reſtringents; to which may be added galls, alum, *&c.* remembering to let the horſe ſtand conſtantly dry.

Hoof-bound, what.

We ſay a horſe is hoof-bound, when the hoof is ſo tight round the inſtep, that it turns the foot ſomewhat into the ſhape of a bell. This is cauſed ſometimes by ſhoeing as above, to widen the heel, and ſometimes by cutting the toes down too much, which gives that ſhape to the foot, and cauſes the horſe to go lame.

How remedied.

To remedy this diſorder, Mr. Gibſon recommends the following method. Let the foot be drawn down from the coronet almoſt to the toe with a drawing knife, making ſeven or eight lines or razes through the hoof, almoſt to the quick; afterwards keep it charged with pitch or roſin, till the lines are wore out in ſhoeing, which will require ſeveral months; therefore horſes are generally turned

turned out to graſs. Before we cloſe this chapter, take theſe ointments for the feet and hoofs, *viz.*

Ointments for the feet and hoofs.

Sweet oil, roſin, and hogs-lard, each a pound; bees-wax, two ounces; honey, a pound: melt together.

Or,

TAKE baſilicon, one pound; wax and neats-foot oil, of each half a pound; roſin, four ounces: mix together.

CHAP. XXXIX.

Of Sand-Cracks *and* Quittors.

A ſand-crack deſcribed.

WHAT is called a ſand-crack, is a little cleft on the outſide the hoof; if it runs in a ſtrait line downwards, and penetrates through the boney part of the hoof, it often proves troubleſome to cure; but if it paſſes through the ligament that unites the hoof with the coronet, it is then apt to breed a quittor, or falſe quarter, which is dangerous.

When

When the crack only penetrates through the hoof, without touching the ligament, unleſs the hoof be hollow, it may eaſily be cured, by raſping only the edges ſmooth, and applying thick pledgets of baſilicon, and binding them down with a piece of ſoft liſt; if ſome precipitate be added to it, this medicine will be improved thereby, and in general anſwers the end, without any other application. But if you perceive any hollowneſs under the hoof, and that the cleft has a tendency to penetrate through the griſtle or ligament, the beſt method, in that caſe, is to fire out of hand with irons that are not made too hot, firſt raſping very thin and wide, from both ſides of the cleft: the horſe muſt not carry any weight for ſome time, but be turned out to graſs, or wintered in a good farm-yard. How treated.

A quittor is an ulcer formed between the hair and hoof, uſually the inſide quarter of a horſe's foot; it ariſes often from treads and bruiſes, ſometimes from gravel, which, by working its way upwards, lodges about the coronet: if it is only ſuperficial, it may be cured with cleanſing dreſſings, bathing the coronet every A quittor deſcribed.

every day with ſpirit of wine, and dreſſing the ſore with the precipitate medicine.

How cured in particular caſes.

But if the matter forms itſelf a lodgment under the hoof, there is no way then to come at the ulcer, but by taking off part of the hoof; and if this be done artfully and well, the cure may be effected without danger.

When the matter happens to be lodged near the quarter, the farrier is ſometimes obliged to take off the quarter of the hoof, and the cure is then, for the moſt part, but palliative; for when the quarter grows up, it leaves a pretty large ſeam, which weakens the foot; this is what is called a falſe quarter, and a horſe, with this defect, ſeldom gets quite ſound.

How cured when the coffin-bone is affected.

If the matter, by its confinement, has rotted the coffin-bone, which is of ſo ſoft and ſpongy a nature, that it ſoon becomes ſo, you muſt enlarge the opening, cut away the rotten fleſh, and apply the actual cautery, or hot iron pointed pyramidically, and dreſs the bone with doſſils of lint, dipped in tincture of myrrh, and the wound with the green or precipitate ointment. When the ſore is not enlarged

enlarged by the knife, which is the beſt and leſs painful method, pieces of ſublimate are generally applied, which bring out with them cores, or lumps ot fleſh; blue vitriol powdered, and mixed with a few drops of the oil, is uſed alſo for this purpoſe, and is ſaid to act as effectually and with leſs pain and danger: during the operation of theſe medicines, the foot, I think, ſhould be kept in ſome ſoft poultice, and care ſhould be taken, during the whole dreſſing, to prevent proud fleſh riſing, which otherwiſe will not only retard the cure, but prevent a firm and ſound healing.

CHAP. XL.

Of Wounds *in the* Feet, *from* Nails, Gravel, *&c.*

ACcidents of this ſort are very common, and ſometimes, for want of early care, prove of bad conſequence; for the parts being naturally tender, are very ſuſceptible of inflammation; and when matter is once formed, if a free dif-

Wounds in the feet ſhould particularly be attended to

discharge is not procured, the bone, which is spongy, soon becomes affected, and the whole foot is then in danger.

In what mannar they should be treated in general.

When any extraneous bodies, such as nails, stubs, thorns, *&c.* have passed into the horse's foot, you should endeavour to get them out as soon as possible; and after washing the part with oil of turpentine, dress the hole with lint dipped in the same, melted down with a little tar; the foot may be stopped up with bran and hogs-lard heated together, or put it into the turnep, or any soft poultice: this method is generally successful, when the nail, *&c.* is intirely removed; but if any piece, or particle, should remain behind, which may be suspected by the degree of pain, and discharge of matter; after paring away the sole as thin as possible, introduce a bit of sponge tent, in order to enlarge the hole, that it may be drawn out by a small pair of forceps, or brought away by digestion: if this method should not succeed, but the lameness continues, with a discharge of a thin, bloody, or stinking matter, you must no longer delay opening the wound with a drawing knife to the bottom, and then dress as above directed, or with the turpentine digestive, divided with the yolk of an egg, and

and a little tincture of myrrh; afterwards with the precipitate medicine.

When from pricking in shoeing.

If the lameness proceeds from pricking in shoeing, the foot should be pared thin on the wound side, and after dressing with the tar and turpentine, let it be stopped with the poultices above mentioned, or with two ounces of common turpentine, melted down with four of lard: should this method not succeed, follow the above directions.

What wounds are dangerous.

If the nail penetrates to the joint of the foot, where matter may be formed, and by its long continuance putrefy, so as to erode the cartilages of the joint, the case is incurable.

If the nail has passed up to the nut-bone, it is incurable, because this little bone cannot exfoliate, and because the cartilaginous part of it is destroyed, as soon as injured.

If the nail has not passed to the tendon, the horse will do well, without a necessity for drawing the sole; but if the tendon is wounded, the sole must be carefully drawn, because a sinovia and gleet is discharged.

When from gravel.

When gravel is the cauſe, it for the moſt part follows the nail-holes, and if it gets to the quick, cannot return, unleſs it is ſcraped out; for the make of the hoof which is ſpiral like an ear of corn, favours its aſcent, ſo that the gravel continues working upwards towards the coronet, and forms what the farriers call a quittor-bone.

The cure.

The nature of this diſorder points out the method of cure, which is to be as expeditious and careful as poſſible, in getting out the gravel; if it is found difficult to effect this, let the ſole or hoof be pared thin, and if neceſſary, the wound enlarged to the bottom, and then dreſſed up as uſual. Should the coffin-bone be affected, you muſt follow the directions laid down in the preceeding chapter, remembring always to bathe the hoof with vinegar, or repellers, in order to allay the heat and inflammation, which often happen on ſuch occaſions; and ſhould the pain and anguiſh affect the legs, treat them in the ſame manner, or charge the leg and paſtern with a mixture of wine lees and vinegar.

Figs

Figs are ſpongy ſwellings on the bottom of horſes feet, generally on the ſides of the fruſh. Theſe, or any other kind of excreſcences, ſuch as warts, corns, grapes, *&c.* are beſt removed by the knife; and if any part of them be left behind, or ſhould ſhoot up afreſh, touch them with the cauſtick, or oil of vitriol, and dreſs with Ægyptiacum; to which may be added, when they are very rebellious, a ſmall quantity of ſublimate: when the roots are quite deſtroyed, you may incarn with the precipitate medicines, and dry up the ſore with the following. Figs, warts, grapes, corns, &c.

TAKE of white vitriol, allum, and galls in powder, of each two ounces; diſſolve them by boiling a little in two quarts of lime-water, and keep in a bottle for uſe, which ſhould be ſhook when uſed. A drying waſh.

Theſe drying kind of medicines are ſeldom uſed to advantage before the knife; which ſhould not be ſpared on theſe occaſions, even though the roots of ſome of theſe excreſcences are fixed, as they frequently are, on the tendon and ſole; for they muſt be intirely extirpated before a radical cure can be performed. Should Some proper obſervations.

a large bleeding enſue, from a diviſion of the artery in the bottom of the foot, apply cloſe to it a button of tow, or lint covered with powder of alum, or with vitriol and bole; fill the whole foot up with dry dreſſings, cloſely applied, and ſecure them on by a proper bandage. Obſerve the preceeding directions in regard to inflammation, and dreſs the wound according to the rules we have already laid down.

As in this and other chapters we have mentioned the danger of wounded tendons and membranous parts, we cannot cloſe it without mentioning ſome curious obſervations of the learned Mr. Haller, who, by a number of experiments made on the irritable and ſenſible parts of a variety of animals, has endeavoured to overthrow this doctrine entirely, though ſo long held ſacred. As the experiments, which ſupport his opinion, have opened to us a new field of diſcoveries, which may be of ſervice in their conſequences, we ſhall, for the ſake of the curious reader, mention a few of them.

Contrary then to the general opinion, he proves firſt, that tendons are incapable of all ſenſation and pain; this poſition he

he has confirmed a hundred times, by a variety of experiments, as cutting, pricking, and wounding them in various ſhapes; the animal all this while continuing quiet and eaſy, ſhewing not the leaſt ſign of pain, and when let looſe, walked about perfectly eaſy: the ligaments and capſulæ of the joints he alſo affirms to be equally ſenſible of pain, by a variety in of experiments, made by filling the articulations with oil of vitriol, *&c.* the animals ſhewing no ſenſe of pain from ſuch acrid applications; and theſe wounds, hitherto thought ſo dangerous, were eaſily healed with nothing but the animal's ſaliva, often even without it. Other experiments he has made on theſe parts with needles, or ſharp inſtruments, with the ſame ſucceſs: in ſhort, he endeavours to prove the *perioſteum* inſenſible, the *dura*, *pia mater*, all membranes; and whatever parts like theſe, are deſtitute of nervous fillaments, he ſays, are void of pain; and in proportion to the quantity of them, the part is more or leſs ſenſible, or ſubject to pain. As this doctrine, and the experiments which ſupport it, are now under the conſideration of the learned, we may ſoon expect the reſult of their enquiries: we ſhall only take the liberty to remark, that this new doctrine has

yet made no alteration in practice, nor probably will; ſince phyſicians and ſurgeons have chiefly to do with tendons, membranes, *&c.* in an inflamed, or morbid ſtate, not in the ſound ſtate theſe experiments were made; for though in the latter, they may appear to have little or no ſenſations, yet when inflamed, as in the former, experience muſt convince us, they are often attended with intenſe pains and fatal conſequences; as in the pleuriſy and phrenitis, in punctured and overſtrained tendons and ligaments, eſpecially when theſe accidents happen in morbid habits, and an inflammatory ſtate of blood.

CHAP. XLI.

Of the Running-Thruſh, Canker, *and* Loſs *of* Hoof.

The running-thruſh deſcribed.

THE thruſh, or fruſh, is an impoſthume, that ſometimes gathers in the frog; or a ſcabby and ulcerous diſpoſition, which ſometimes cauſes it to fall off: when the diſcharge is natural, the feet

feet ſhould be kept clean, but no drying waſhes made uſe of, it being thought as unſafe to repel ſome of theſe diſcharges, as to cure ſome ſweaty feet.

When an impoſtume, or gathering appears, the ſafeſt way is to pare out the hard part of the frog, or whatever appears rotten; and waſh the bottom of the foot two or three times a day with old chamberlye; this is the ſafeſt and beſt way of treating them. But when a horſe has been neglected, and there is a ſtrong flux to the part, it is apt to degenerate into a canker; to prevent which uſe the following. The method of cure.

TAKE ſpirit of wine and vinegar, of each two ounces; tincture of myrrh, and aloes, one ounce; Ægyptiacum, half an ounce: mix together. A waſh for the thruſh.

Bathe the thruſh with this, wherever there appears a more than ordinary moiſture, and lay over the ulcer a little tow dipped in the ſame. The purges and diuretics recommended in the greaſe, ſhould be given at this time, to prevent the inconveniences that the drying up theſe diſcharges frequently occaſion.

A canker

A canker deſcribed, with the cure.

A canker in the foot proceeds, for the moſt part, from thruſhes, when they prove rotten and putrid, though many other cauſes may produce this diſorder. The method uſed by farriers for the cure, is generally with hot oils, ſuch as vitriol, aqua fortis, and butter of antimony, which are very proper to keep down the riſing fleſh, and ſhould be uſed daily, till the fungus is ſuppreſſed, when once in two days will be ſufficient, ſtrewing fine precipitate powder ower the new-grown fleſh till the ſole begins to grow.

Obſervation.

There is one great error committed often in this cure, that is, in not having ſufficient regard to the hoof; for it ſhould not only be cut off, wherever it preſſes on the tender parts, but ſhould be kept ſoft with linſeed oil; and as often as it is dreſſed, bathe the hoof all round the coronet with chamberlye. Purging is very proper to compleat the cure.

The loſs of the hoof, how repaired.

The loſs of the hoof may be occaſioned by whatever accident may bring an impoſtumation in the feet, whereby the whole hoof becomes looſened, and falls off from the bone. If the coffin-bone remains

remains uninjured, a new hoof may be procured by the following method.

The old hoof ſhould by no means be pulled off, unleſs ſome accident happens, that requires its removal, for it ſerves as a defence to the new one, and makes it grow more ſmooth and even; and indeed nature will in general do this office at her own proper time.—On the removal of the hoof, a boot of leather, with a ſtrong ſole ſhould be laced about the paſtern, bolſtering and ſtopping the foot with ſoft flax, that the tread may be eaſy: dreſs the ſore with the wound ointment, to which ſhould be added the fine powders of myrrh maſtich, and olibanum. If this medicine ſhould not be ſufficient to prevent a fungus, burnt alum, or precipitate, may be added to it, and the luxuriant fleſh may be daily waſhed with the ſublimate water. Remark.

CHAP.

CHAP. XLII.

Of Venemous bites *from* Vipers *and* Mad Dogs.

The action of poiſons, not to be accounted for.

THE action of poiſons on animal bodies has hitherto appeared of ſo intricate a nature, and the nervous ſyſtem, which is ſo principally affected by them, ſo imperfectly underſtood, that it is no wonder the moſt ingenious authors have given ſo little ſatisfaction in treating this ſubject; we ſhall therefore only offer ſuch remedies and methods of cure, as ſtand recommended to us on the beſt authority.

The external method of cure.

The firſt intention is, to prevent the poiſon mixing with the blood; this poſſibly might be affected, if the part would admit of being inſtantly cut out with a knife; the cupping-glaſſes might be applied to empty the veſſels, and the wound afterwards cauterized with a hot iron. The ſurrounding parts ſhould afterwards be well bathed with ſalad oil, and the ſore dreſſed once or twice a day with hot Ægyptiacum. It is neceſſary alſo, that it

it ſhould be kept open for forty days at leaſt with a piece of ſponge, or orrice root ſmeared over with the precipitate ointment, or that prepared with Spaniſh flies: theſe ſeem to be the chief external remedies to be depended on.

The internal remedies for bites from vipers.

Internally, for bites from vipers, may be given cordial medicines, ſuch as Venice treacle and ſalt of hartſhorn, an ounce of the former, with a dram of the latter, every night for a week; or where it can be afforded, a proportionate quantity of the famous Tonquin remedy of muſk and cinnabar, ſo much recommended in bites from infected animals.

Dr. Mead's method deſcribed, for bites from mad dogs.

To prevent the tragical effects of the bite from a mad dog, give the above medicines; or the method recommended by Dr. Mead may be purſued in the following manner: take away three quarts of blood, and give the horſe night and morning half an ounce of aſh-coloured ground liverwort, and a quarter of an ounce of pepper; this remedy may be continued a week, or ten days, when the horſe ſhould be plunged into a river, or pond, every morning, for a month or ſix weeks.

The

Dr. James's mercurial method recommended for the

The following mercurial method having been found ſucceſsful, both in dogs and men, we here recommend it as a remedy for horſes, and indeed think it more to be depended on than moſt others. Dr. James has given a full account of it in the Philoſophical Tranſactions, from which, for the ſake of the curious reader, we give the following abſtract.

" About Michaelmas 1731, Mr. Floyer, " of Hants, complained, that he was " afraid of a madneſs among his fox- " hounds; for that morning one had " run mad in his kennel: the Doctor " took this opportunity of telling, that " he had long believed, that mercury " would, if tried, prove the beſt remedy " againſt this infection. Mr. Floyer neg- " lected this advice till the February fol- " lowing: mean time he tried the me- " dicine in Bates, commonly known by " the name of the pewter-medicine, as " alſo every thing elſe that was recom- " mended to him by other ſportſmen, " but to no purpoſe; for ſome of his " hounds run mad almoſt every day " after hunting; upon this he took his " hounds to the ſea, and had every one " of them dipt in the ſalt water; and

" at

" at his return, he brought his pack to
" another gentleman's, ſix miles diſtance
" from his own. But, notwithſtanding
" this precaution, he loſt ſix or ſeven
" couple of dogs in a fortnight's time.
" At length in February, Mr. Floyer tried
" the experiment, the Doctor had recom-
" mended, upon two hounds that were
" mad, and both very far gone; they
" refuſed food of all ſorts, particularly
" fluids, ſlavered much, and had all the
" ſymptoms of a hydrophobia to a great
" degree; that night he gave twelve
" grains of turpeth mineral to each of
" the two dogs, which vomited and
" purged them gently: twenty four hours
" after this, he gave each twenty-four
" grains; and after the ſame interval,
" he gave forty-eight more to each: the
" dogs ſalivated very much, and ſoon
" after lapped warm milk; at the end of
" twenty-four hours more, he repeated
" to one dog twenty-four grains more,
" and omitted it to the other; the dog
" that took this laſt doſe, lay upon the
" ground, ſalivated extremely, was in
" great agonies, and had all the ſymp-
" toms of a ſalivation raiſed too quick;
" but got through it; the other relapſed
" and died.

" To

" To all the reſt of the pack he gave " ſeven grains of turpeth for the firſt " doſe, twelve for the ſecond doſe, at " twenty-four hours diſtance, which was " repeated every other day for ſome little " time. The method was repeated at " the two or three ſucceeding fulls and " changes of the moon: from this time " he loſt not another hound; and though " ſeveral afterwards were bit by ſtrange " dogs, the turpeth always prevented any " ill conſequences.

" The Doctor and his friends tried the " ſame thing upon a great many dogs, " and it never failed in any one inſtance; " though dogs bit at the ſame time, " and by the ſame dogs, have run mad, " after moſt other medicines had been " tried."

In what manner given to a horſe.

The ſame method may be obſerved in giving this medicine to a horſe, the quantity only being angmented to two ſcruples, or half a dram each doſe; the directions laid down in the chapter on FARCY being attended to. There are various other remedies directed for theſe purpoſes, but the preſent, I think, are chiefly to be relied on.

We

We ſhall cloſe this chapter, however, with the following, which has long been in great eſteem, and is by ſome thought to be an infallible cure for the bite of a mad dog.

A drink for venomous bites.

TAKE ſix ounces of rue; Venice treacle, garlick, and tin ſcraped, of each four ounces; boil in two quarts of ale over a gentle fire to the conſumption of half; ſtrain off from the ingredients, and give the horſe four or five ounces every morning faſting.

The ingredients may be beat in a mortar, and applied daily to the wound as a poultice.

CHAP. XLIII.

Of Gelding, Docking, *and* Nicking *of* HORSES.

TO treat of the operations in farriery, is ſomewhat foreign to our original deſign; but as we have a new apparatus and method to offer, con-

cerning the *Nicking* of horſes, we are induced alſo to make ſome few obſervations on *Gelding*, and *Docking*, eſpecially as the ſymptoms of the latter, and manner of treating them, are on ſimilar principles.

Some uſeful obſervations on gelding.

Without entering into particulars, we ſhall only obſerve, that the *Gelding* of a foal is an operation of little conſequence, and ſeldom attended with any bad ſymptoms; yet the extirpating the ſtones of a full grown horſe, requires the care and ingenuity of a good artiſt. The uſual method of ſecuring the ſpermatic veſſels, is by cauteriſing their extremities, and filling up the ſcrotum or bag with ſalt: this method, though ſucceſsfully practiſed on young colts, ſhould by no means be truſted to in grown horſes; but after the ſcrotum is opened, and the ſtone turned out, a ſtrong waxed thread ſhould be tied round the cord, and then the teſticle cut off; this undoubtedly is the moſt effectual way to ſecure the veſſels, as the eſchar from burning may, by accidents, be removed, and a profuſe bleeding enſue before it is diſcovered.

The ligature preferred to the cautery.

The wound may be dreſſed with the uſual digeſtive; but ſhould a fever, or inflam-

inflammtion enſue, bleed largely, and follow the directions laid down in the chapter on FEVERS: ſhould the belly and ſheath ſwell, foment twice a day, and bathe often with oil of roſes and vinegar, till the tumour ſubſides, and wound digeſts. The manner of dreſſing, and general treatment.

In regard to the *Docking* of horſes, though it is an operation ſo common, and in general ſo ſucceſsfully executed; yet as it does now and then miſcarry, by an inflammation and gangrene ſucceeding, which ſometimes are communicated to the bowels; we have thought proper to lay down ſome general rules and directions, both in relation to the operation, and the ſubſequent manner of treating the ſymptoms; and as theſe moſt probably ariſe from the tendons of the tail, ſuffering by an injudicious application of the knife or ſearing-iron, or an improper ſeaſon for the operation, we ſhall firſt obſerve, that the very hot or cold months are by no means proper for that purpoſe, for reaſons we apprehend obvious to every one: the next obſervation we ſhall make is, that it ſhould always be performed by inciſion, or the chopping engine; the knife being paſſed through the tail from above, while it Some general directions in relation to docking.

lays on the block; for when the cutting inſtrument is applied underneath, the blow is then given on the tail, which of courſe, by bruiſing the tendons, may well be ſuſpected to occaſion bad ſymptoms. The laſt obſervation we ſhall make, is in regard to the ſearing-iron, which ſhould be ſmooth, and better poliſhed than thoſe generally uſed, and ought to be rubbed clean on a woollen cloth, before the application to the ſtump, otherwiſe the ſparks, which fly from the iron, are apt to occaſion great pain, with ſwelling both of the ſheath and fundament; nor ſhould it ever be applied flaming hot, for then it brings the burnt part away with it; and as it requires a re-application, in order to form a new eſchar on the veſſels, the bone by theſe means is frequently left too much expoſed, ſo that it is often a conſiderable time before it is covered.

The manner of dreſſing the ſtump, and general treatment.

Farriers ſeldom apply any thing to the ſtump; which need only be anointed with the wound ointment, and when the eſchar is digeſted off, may be waſhed with allum or lime-waters: but if an inflammation enſues, with a diſcharge of thin matter, the turpentine digeſtive, with tincture of myrrh, p. 245. ſhould be applied,

plied, with the bread and milk poultice over it; bathe the rump often with oil of roſes and vinegar, bleed largely, and obſerve the cooling method laid down in the chapter on *Fevers*; and if the fundament is ſwelled, and the inflammation at all ſuſpected to be communicated to the bowels, let cooling emollient glyſters particularly be injected two or three times a day. Should a gangrene enſue, add Ægyptiacum to your dreſſings, and ſpirits to the fomentation; and apply over all the ſtrong-beer poultice, with London treacle, twice a day.----Theſe ſeem to be the only means to be depended on, and will without doubt, in general, be ſucceſsful, when applied in due time.

Before we deſcribe the operation of *Nicking*, it may be neceſſary to enquire how the effect of it (the elevation of the tail) is brought about; and in order to know this, and judge with propriety of the operation, we muſt conſider the tail as elevated or lifted up by one ſet of muſcles, and depreſſed or pulled down by another. Nicking how accounted for.

It is ſomewhat remarkable that Snape, Saunier, and Gibſon, who, in general, are Obſervation.

pretty exact in their anatomical deſcriptions, ſhould omit, in their account of the muſcles of a horſe, to deſcribe thoſe of the tail: for which reaſon, as a proper opportunity has not offered to ſupply this omiſſion by making a compleat diſſection with that accuracy we could have wiſhed, it is hoped the ſubſequent imperfect deſcription will be excuſed, as it was taken only from a tail that was diſſected after docking.

An anatomical deſcription of the tail.

Here we obſerved, that the muſcles, which elevate the tail, are more numerous, large and ſtrong, than thoſe that depreſs it; that they are cloſely connected to the bones of the tail by fleſhy fibres, and terminate in ſtrong tendons at the extremity: but the muſcles of the latter ſoon form into tendinous expanſions, and three large tendons, which are inſerted into the latter bones of the tail: there are ſeveral other ſmall tendons, which run laterally, whoſe uſe, moſt probably, is to move the tail ſideways. The arteries are four in number, and run ſometimes above the bones of the tail, conſequently eaſily avoided by a dextrous hand, as they cannot readily be wounded by the knife, in dividing the tendons neceſſary to be cut in this operation.

The

The art of nicking horſes then chiefly conſiſts in a tranſverſe diviſion of theſe depreſſing tendons of the tail, and ſuch a poſition afterwards, as will keep their extremities from coming again into contact; ſo that an intervening callus fills up the vacuity: by theſe means an additional power is given to the antagoniſt muſcles, *viz.* the elevators; the counteraction of the depreſſers being manifeſtly abated by the diviſion of the tendons, and the intervention of the callus. The operation deſcribed.

The uſual method of ſupporting the tail by a pulley and weight, is liable to many exceptions, the extremities of the divided tendons not being by that method kept ſufficiently aſunder; the ſituation of the tail being rather inclined to a perpendicular, than a curved direction; this poſition too is liable to many variations, from the different movements of the horſe, and is the reaſon that the tail frequently inclines to one ſide; as the nick may heal up faſter on one ſide than the other; the diſagreeable ſituation the horſe muſt ſtand in, with a weight conſtantly hanging to his tail, is another material objection, beſides the neceſſity The inconveniencies of the old method.

of removing it when the horſe is exerciſed or taken out to water.

A new method recommended.

To remedy theſe inconveniences, and perfect this operation, a very ingenious gentleman, who had thoroughly conſidered it, has been ſo kind as to favour me with a draught, and deſcription of a machine he contrived for that purpoſe; which has been practiſed frequently with the expected ſucceſs, and indeed at firſt view appears in every reſpect calculated to correct all the defects in the old one: as I doubted not its reception being perfectly agreeable to the public, I have ordered a plate to be engraved, which, with the annexed deſcription, will, I hope make it very familiar and intelligible to every capacity.

Obſervations in regard to the operation.

In regard to the operation, it is worth notice, that the extremities of the tendons, which jut out in the operation, need not here be cut off, as is cuſtomarily done; the number of the inciſions muſt be in proportion to the length of the tail, but three in general are ſufficient. The moſt approved method of dreſſing at firſt is with powdered roſin, and ſpirit of wine, applying a ſoft doſſil of lint or tow, dipped in the ſame, between

tween each nick, and lapping the tail up with a linen cloth and broad fillet; which the next morning ſhould be cut open down the back part of the tail, and the morning after be gently taken off; when it will be proper to plat the hairs, in order to keep them clean, and to ſet the tail, as will be directed in the plate and references.

Some general directions.

Every two or three days the tail ſhould be let down, and the upper part next the rump bathed with hot vinegar; and if it begins to crack, and the hair comes off, a little tincture of myrrh will ſoon put a ſtop to it. To obviate any threatening ſymptoms that may ariſe in regard to the wounds, have recourſe to the above directions on docking.

After ſix or eight days, it will be proper to let the horſe ſtand without the machine for a few hours, and then be rode about, in order to obſerve how he carries his tail; by which means you will the better judge how to faſten it down, whether to confine it cloſer, or give it more ſcope: after the wounds are healed up, it may be neceſſary to keep the tail ſuſpended, till the callus is confirmed, at leaſt for ſome hours in the day; though

though a greater liberty may now be allowed it.

The advantages of the machine.

Thus this machine anſwers every intention, is far preferable to the pulley, as it keeps the tendons properly ſeparated, and the tail in a certain poſition; ſo that the wounds heal up uniformly, without any riſk of its being caſt to one ſide; the horſe alſo is more at eaſe, having no weight conſtantly pulling and teazing him, and may be taken out to water or exerciſe, without any inconveniency, or diſturbance.

Directions for the Application of the Nicking Machine; *and Explanation of the* Plates.

WHEN the hair of the tail is properly platted, and tied with a knot or two at the end, the pad, *&c*, as deſcribed in Fig. I. muſt be put on, and the machine as in Fig. II. buckled to them, letting the part G in the machine lie over the part of the tail that joins to the horſe's rump; then let an aſſiſtant, ſtanding on the ſide rail of a brake, or any other conveniency that may place him

him above the horſe, raiſe the horſe's tail very gently, till the knot of the tail gets ſo far beyond the ſtrings L L in Fig II. that it may be tied down, which being done, the tail may be let down lower, or taken up higher at pleaſure. It is to be obſerved, that the ligature is not made on the tail itſelf, but on the platted hair, at the extremity of the ſtump.

The machine, Fig. II. muſt be made of a peace of tough wood, about a foot long, *viz.* from A to B, and about 19 inches broad from C to D, and 7 or 8 inches thick. The under part muſt be hollowed, ſo as to let in the horſe's rump, and that the wings C D may reſt on his buttocks. To receive the tail, a groove muſt be cut from G to H, about 3 inches wide, and 3 deep at G, leſſening gradually both in height and breadth to H. Holes muſt be made at certain diſtances in the groove, as at H, for the ſtring, and a nick cut to receive the billet from the ſtrap K. Two buckles fixed to the machine, as at I I.

The pad, *&c.* are ſufficiently deſcribed in Fig. I. and its references; the wood muſt be ſloped off from E to C and A, and

and ſo on to the other ſide, to lighten the machine, and hollowed at B G and F.

Fig. I.

Repreſents a horſe with his tail in the frame, or machine. A, is a pad, to which is faſtened a circingle B. C C, two ſide ſtraps, one on each ſide of the horſe, faſtened to the circingle, to keep the machine from going to either ſide. D, a breaſt plate, to prevent the pad, &c. ſlipping back. E, a ſtrap fixed to the pad, and buckling to the machine, to keep the tail on the ſtretch at pleaſure. F, the ſtring tied on the hair, to confine the tail down to the machine.

Fig. II.

From A to B is 12 inches. From C to D, meaſured with a ſtring drawn over E F, is 19 inches. From the top of the groove at E to the bottom G, is 3 inches. From E to F, the wideſt part of the groove, is 3 inches, gradually narrowing, as a tail leſſens to its extremity. The dots about H are holes in the groove, through which a piece of tape or packthread muſt be put, according to the length of the dock, and the diſtance of the knot, to tie the tail down behind the knot. I I, the buckles, to receive a ſtrap

Fig. 1.

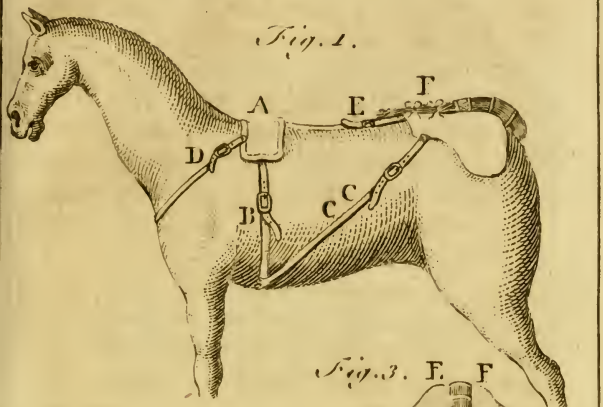


Fig. 2.

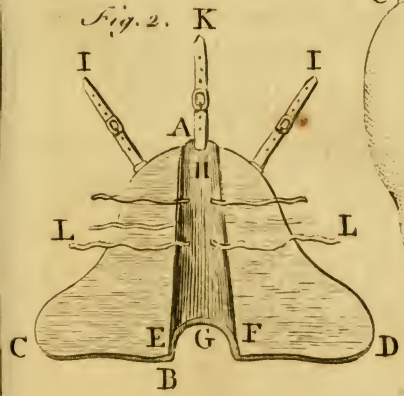
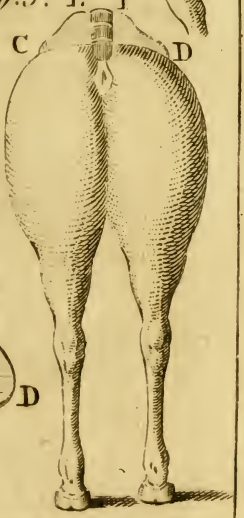


Fig. 3.



ſtrap from the circingle on each ſide, as deſcribed in Fig. I. which keeps the machine from turning to either ſide. K, the ſtrap with a billet and buckle, which comes along the back from the pad, and is faſtened to the machine through a nick cut juſt above H. LL, the ſtring, to tie down the tail. B G F, the hollow to let in the rump.

Fig. III.

Repreſents the horſe with the machine on, ſtanding directly before you, where the depth of it is ſhewn, being three inches.

CD, the extremities of the wings.

E F, the upper part.

CHAP. XLIV.

Of Ruptures, Anticor, Colt-Evil, *or* Gonorrhœa, *and Diſeaſes of the* Mouth.

HAVING omitted in their proper places to ſpeak of the above diſorders, ſome of which are not very common,

mon or peculiar to horſes in this climate, we have thought proper to throw them together in this laſt chapter, that the reader might not be diſappointed in his enquiries after their cure.

Ruptures deſcribed.

In regard then to ruptures, though they are generally divided into particular claſſes, we ſhall only obſerve, that by violent efforts of the horſe, or other accidents, the guts or caul may be forced between the muſcles of the belly at the navel, and through the rings of the muſcles into the ſcrotum or cod. The ſwellings are generally about the ſize of a man's fiſt, ſometimes much larger, deſcending to the very hock; they are frequently ſoft, and yield to the preſſure of the hand, when they will return into the cavity of the belly with a rumbling noiſe; and in moſt the vacuity may be felt through which they paſſed.

The method of treating ruptures.

On their firſt appearance, endeavours ſhould be made to return them by the hand; but if the ſwelling ſhould be hard and painful, in order to relieve the ſtricture, and relax the parts, through which the gut or caul has paſſed, let a large quantity of blood be immediately taken away, and the part fomented twice or thrice

thrice a day, applying over it a poultice made with oatmeal, oil, and vinegar, which ſhould be continued till the ſwelling grows ſoft and eaſier, or the gut is returned. In the mean time it would be proper to throw up emollient oily glyſters twice a day, and to let the horſe's chief diet be boiled barley, ſcalded malt, or bran.

Reſtringents of little uſe.

Should the ſwelling afterwards return, we apprehend the reſtringent applications uſually recommended on theſe occaſions, will avail little without a ſuſpenſory bandage; ſo that an ingenious mechanic in that art is chiefly to be relied on for any future aſſiſtance; though it has been obſerved, that with moderate feeding, and gentle exerciſe, ſome horſes have continued to be very uſeful under this complaint.

The anticor deſcribed.

The anticor is a diſorder not very common among our Engliſh horſes, or thoſe in northern climates: but it is particularly taken notice of by the French, Spaniſh, and Italian writers; who deſcribe it a malignant ſwelling in the breaſt, which extends ſometimes to the very ſheath under the belly; it is attended with a fever, great depreſſions and weakneſs, and a total

total loſs of appetite; but this laſt ſymptom may probably be owing to an inflammation, which is ſuppoſed to affect the whole gullet and throat, ſo great as to make the horſe ſwallow with the utmoſt difficulty, and to endanger ſuffocation.

The cure. The cure ſhould firſt be attempted by large and repeated bleedings, to abate the inflammation; emollient glyſters ſhould be injected twice or thrice a day, with an ounce of ſal prunellæ in each, and the cooling drink in the chapter on *Fevers* ſhould be given inwardly; the ſwelling ſhould be bathed with the marſhmallow ointment, and a ripening poultice, with onions boiled in it, ſhould be daily applied over it. If by this method, continued four or five days, the inflammation in the throat and gullet is removed, our attention ſhould more particularly turn to encourage the ſwelling at the breaſt, and bring it, if poſſible, to matter: to which end, continue the poultice, and give two ounces of Venice treacle diſſolved in a pint of beer every night: when the ſwelling is grown ſoft, it muſt be opened with the knife, and dreſſed with the turpentine digeſtive, the danger now being over.

But

But ſhould it be found impracticable to bring the ſwelling to matter, and it increaſes upwards, ſo as to endanger ſuffocation; authors have adviſed to pierce the tumour with a hot pointed cautery in five or ſix places, to dreſs with the above digeſtive; and, in order to ſtimulate and promote a greater diſcharge, to add to it a ſmall quantity of Spaniſh flies and euphorbium in powder; fomenting at the ſame time, and bathing the circumjacent parts with ointment of marſh-mallows. M. Gueriniere, as well as Soleyſel, have adviſed opening the ſkin, when the tumour cannot be brought to matter, in order to introduce a piece of black hellebore root ſteeped in vinegar, and to confine it there for twenty-four hours; this alſo is intended as a ſtimulant, and is ſaid to anſwer the intention, by occaſioning ſometimes a ſwelling as big as a man's head. Some particular directions.

Beſides the diſorders of the mouth, which we have already animadverted on, there are frequently obſerved on the inſide the lips and palate, little ſwellings or bladders, called *gigs:* ſlitting them open with a knife, or lancet, and waſhing them afterwards with ſalt and vine- Diſorders of the mouth deſcribed.

gar, is in general their cure; but when they degenerate into what are called *cankers*, which are known by little white ſpecks, that ſpread and occaſion irregular ulcers; the beſt method then is to touch them daily with a ſmall flat cautery, moderately heated, till the ſpreading is ſtopped, and to rub the ſores three or four times a day with Ægyptiacum, and tincture of myrrh, ſharpened with oil, or ſpirit of vitriol: when by this dreſſing the ſloughs are ſeparated, they may be waſhed frequently with a ſponge dipped in copperas, or ſublimate water, if they continue to ſpread; or a tincture made by diſſolving half an ounce of burnt alum, and two ounces of honey, in a pint of tincture of roſes. Either of theſe will dry them up, and are very uſeful in moſt diſorders of the mouth.

Canker, what.

A relaxation, and ſwelling of the palate, ſometimes happens to horſes on catching cold. To remedy this diſorder, blow pepper on the part, or anoint it with the ſame mixed up with honey. The tincture above-mentioned may be uſed for this purpoſe, to which may be added half an ounce of ſpirit of ſal armoniac.

A relaxation of the palate.

The

The colt-evil is ſuppoſed to ariſe from ſtoned colts having full liberty with mares, before they are able to cover them; whence frequently enſues an excoriation, or fretting on the glands, and a ſwelling of the ſheath: this laſt diſorder frequently proceeds too from dirt, or filth lodging there, and is often removed by waſhing the part clean with butter and beer: but when the yard itſelf is ſwelled, foment it twice a day with marſh-mallows boiled in milk, to which may be added a little ſpirit of wine; anoint the excoriation with the white ointment, or waſh it with a ſponge dipped in lime, to a pint of which may be added two drams of ſuger of lead: the yard ſhould be ſuſpended up to the belly; and if the ſwelling ſhould increaſe with inflammation, bleed, and give the cooling phyſick, anoint with ointment of elder, and apply the bread and milk poultice. The colt-evil, and cure.

If a ſimple gonorrhœa, or ſeminal gleet, is obſerved to drip from the yard (which is often the caſe in high-fed young horſes, where a relaxation of the glands and ſeminal veſſels has been brought on by frequent emiſſions) let the horſe be The gonorrhœa, and cure.

plunged every day into a river or pond; give him two or three rhubarb purges, at proper diſtances, and intermediately the following balls.

A ſtrengthning ball.

TAKE of balſam of Copivi, or Venice turpentine, olibanum, and maſtich powdered, of each two drams; bole armoniac, half an ounce: mix up into a ball with honey, and give it night and morning, till the diſcharge leſſens, and then every night, till it goes off.

Strengthning balls.

Balls prepared with rhubarb and turpentine may alſo be given for this purpoſe, two drams of the former, with half an ounce of the latter.

Obſervation.

The Indian rhubarb is not expenſive; it may be bought, at prime coſt, under twelve pence an ounce.

But ſhould this method not prove ſucceſsful, two or three ſpoonfuls of the following injection may be thrown up his yard every day with a ſyringe.

An injection.

TAKE balſam of Copivi, half an ounce; break it with the yolk of an egg, and add to it lime-water, half

half a pint; honey of roſes, two ounces.

When an ulcer on the proſtrate glands is ſuſpected, this injection is very proper at firſt, to deterge and heal the ſore; but thoſe more reſtringent ſhould afterwards be uſed, in order to cloſe up the relaxed ducts; for this purpoſe take the following. When uſeful.

Tincture of roſes, one pint; burnt alum, two drams; white vitriol, half a dram, or a dram. A reſtringing injection.

But it is worth remarking, that if the horſe continues to ſhed his ſeed, by rubbing his yard againſt his belly; no medicines will avail, till he is cured of this vicious habit; which probably nothing will ſo effectually contribute to remove, as caſtration. Remark.

APPENDIX.

CHAP. I.

Of particular diſorders of the FEET.

The cauſe o this chapter.

THE following obſervations and diſcoveries from M. La Foſſe, are ſo important in their nature, and of ſuch conſequence to the publick, that in order to render this edition more compleat, we have thought proper to inſert them here by way of *Appendix*, for the benefit of thoſe who are not acquainted with that gentleman's valuable performance.

The ignorance of farriers.

And hence it will demonſtrably appear, how lamentably ignorant farriers have hitherto been, of the diſorders attending the

the feet of horſes; particularly of thoſe fractures, to which the coronary and nut-bones are liable; as well as of the tendo-achilles, which this bone ſuſtains; alſo, of the different degrees of violence, to which this tendon is ſubject, from the moſt ſlight diſtraction, or ſtraining of its fibres, to its total rupture.

Though the diſcovery of theſe diſorders does not lead us to the manner of curing them all, becauſe ſome are in their nature abſolutely incurable, as the fractures of the coronary and nut-bone; yet it is of very great uſe, by undeceiving us in a point, that was always hitherto thought curable, from the ignorance of former practitioners; and conſequently the owners of ſuch horſes will no longer be impoſed on, and for the future will ſave the expences of a cure, that muſt be attempted in vain: for we may be convinced by the examination of the plates, that if it was even poſſible to keep the bones together, ſo as to favour their uniting, the fracture being in a joint, there would remain a ſtiffneſs, or callus, which would render the horſe unfit for ſervice. The utility of theſe diſcoveries.

The plates muſt be ſtudied.

In order to be thoroughly acquainted with theſe diſorders of the feet, the anatomical plates of the diſſected parts muſt be attended to: which indeed are ſo well deſigned, that the nature and ſeat of each may be ſufficiently known, to make a true prognoſtic of their different kinds, without having ſtudied anatomy, the mechaniſms and functions of the parts being made obvious to common capacities.

Common errors expoſed.

From hence it will be diſcovered, that the lameneſs in horſes, which commonly is looked for in the ſhoulders, hips, or haunches, is in the foot.

Firſt, Proceeding either from the compreſſion of the fleſhy ſole, by the coronary bones puſhing againſt it; which lameneſs often becomes incurable, by the coaleſcing of theſe bones, for want of applying remedies in due time.

Secondly, The great tendon, called tendo-achilles, is frequently ruptured, very often overſtrained.

Thirdly,

Thirdly, The coronary bones are ſometimes fractured into three pieces, or more.

Fourthly, The nut-bone into two, ſometimes three parts, but always fractured with the coronary bone.

Fifthly, The foot-bone is fractured in two.

Sixthly, From bad ſhoeing, many and various lameneſſes enſue.

The caſes explained.

Theſe diſorders M. La Foſſe has clearly deſcribed, and after many tedious and fruitleſs endeavours to cure theſe complaints, by variety of diſſections, he has found the tendo-achilles ſometimes ruptured near the inſertion, and the coronary bone broke into three pieces, without any diſlocation; perhaps the reaſon of this may be drawn from the conſideration of the manner in which the coronary bone is joined to the paſtern, and foot-bones, by their ſtrong ligaments; which being three in number, each ſeems to have retained its part of the bone, and favoured its diviſion into three parts.

Cauſed by very ſlight efforts.

It is remarkable, that theſe accidents ſometimes enſue very ſlight efforts; the ſudden

ſudden ſpring of a horſe, at ſetting off, or the leaſt falſe ſtep, being ſufficient for that purpoſe.

How theſe lamenefſes become incurable.

A lameneſs frequently enſues a compreſſion of the coronary bone; for that being in motion, it raiſes and puſhes the nut-bone againſt the tendon, which puts the fleſhy ſole in a ſtate of compreſſion, as if between an anvil and a hammer: if the inflammation brought on by theſe means is not diſcuſſed ſoon, by proper applications, or drawing the ſole, the caſe becomes incurable.

Thus we ſee, that an effort, or ſtrain, which might not be violent enough to fracture the coronary, or nut-bones, nor even rupture the tendon, may produce an inflammation of the fleſhy ſole, and be communicated to the ligaments, tendons, and capſulæ of the joints. As the conſequence of ſuch inflammation is generally an anchyloſis, or ſtiff joint, ſo the drawing the ſole, according to M. La Foſſe's repeated experience, prevents ſuch ſtiffneſs, and oſſifications, as it relieves the fleſhy ſole from preſſure: for the ſole is regarded as an expanſion of the muſcles and tendons of the foot; and as this operation enlarges the

Drawing the ſole recommended.

the ſpace in the hoof, the fleſhy ſole being no longer preſſed, its inflammation ceaſes and the foot recovers its natural ſtate.

When the ſole is drawn, the foot ſhould be ſuffered to bleed, in order to empty the blood-veſſels, and lympha-ticks: let it be dreſſed with the turpentine digeſtive; but do not bind it up too ſtrait, and let the hoof be dreſſed with emollients, to moiſten, extend, and ſoften the parts: for the hoof of a horſe may be compared to a ſponge; when it is dry, it contracts itſelf, even to the inner parts; if it be moiſtened, it ſoftens, and dilates: if he ſtand long in a ſtable, without taking care to keep the hoofs moiſt, he often goes lame; becauſe the hoofs are ſuſceptible of contraction, as well as dilatation.

The manner of dreſſing.

Why the hoofs of horſes ſhould be kept moiſt.

The compreſſion in the hoof happens by the coronary puſhing againſt the nut-bone, upon which it partly moves, as we have obſerved before; which having the action of a lever, takes for its point of ſupport the upper and fore part of the foot bone compreſſed; the nut-bone, which it raiſes, and which puſhes againſt the tendo-achilles; which tendon preſſes the

The compreſſions accounted for anatomically.

the fleſhy ſole againſt the horny one: and all theſe combined compreſſions produce an inflammation upon the fleſhy ſole, which ſpreads all over the other parts.

From the different attitude of the foot.

It is extremely probable, that the different attitudes of a horſe's foot, overcharged at the ſame time with the weight of his body, cauſes the different fractures of the coronary and nut-bones; for when the foot has not a direct poſition, the joints are twiſted, as when a horſe treads upon the point, or toe of the hoof; the upper and inner part of the coronary bone, which is in an oblique poſition, preſſed in that ſtate by the burthen of his own body, is forced to yield on one ſide, and riſe on the other; its lower and back parts, which now riſe, drive the nut-bone againſt the tendo-achilles, which ſuſtains it: the tendon in its turn preſſes againſt the fleſhy ſole, which is alſo compreſſed againſt the horny ſole, which is its point of ſupport; the tendon, coronary, and nut-bones become fractured upwards and backwards, by the paſtern, which alſo had an oblique poſition; and downward and forward, by the foot or coffin-joint, which here acts as a wedge: let

let us now ſee how theſe diſorders are to be diſcovered.

Strong compreſſions are diſtinguiſhed, by puſhing the thumb upon the coronet, which makes a horſe feel as ſharp a pain, as if there was a fracture; when the compreſſion is not ſo violent, as that it cannot be thus known by the coronet, it muſt be examined in the foot; the horny ſole muſt be pared till it becomes flexible under the tool, which muſt be done as near the frog as can be; the tool muſt be preſſed, and if the horſe is ſenſible of it in that place, we may be aſſured that there is a compreſſion of the coronary bone upon the nut-bone. How compreſſions are diſcovered.

The length of time the compreſſion has continued, may be known by the adheſion of the horny to the fleſhy ſole; for the horſe bleeds but little after drawing it, becauſe of the interception of the fluids by the compreſſion. Obſervation.

Fractures of the coronary bones are diſtinguiſhed in raiſing the foot by the lower part, where a ſmall tumour is obſerved; the foot muſt be drawn forward, and preſſed upon the coronet with the thumb, and if there is a fracture, a ratling will How fractures are diſcovered.

will be perceived: when the tendon is not ruptured, it ſuſtains the bones, and as it is their point of ſupport, the noiſe is leſs ſenſible, but it is beſt diſtinguiſhed when the tendon is divided.

The method of cure

The method of curing the compreſſion, is to pare the ſole to the quick, to let him bleed at the point of the foot; then dreſs it up with oil of turpentine, and apply an emollient poultice all over the foot, and round the coronet: afterwards foment with the diſcutient fomentation: above three-fourths of theſe caſes, according to M. La. Foſſe, are cured without drawing the ſole, but the moſt certain remedy is to draw it immediately; by this method he has cured horſes in fifteen days, that were not able to put their feet to the ground.

The rupture of the tendon how cured.

The rupture of the tendo achilles is cured by compreſs and bandage dipt in vinegar or verjuice, only keeping the extremities of the tendon in cloſe contact: this is greatly favoured by binding the fetlock, and keeping it in that poſition, by a ſplint externally applied, ſo that the foot cannot bend outwards.

Reflexions on the whole.

From theſe obſervations, it may be concluded, as alſo from the nature of

tendi-

tendinous and membranous fibres, the tenſions and elaſticity of which is very great in the foot, that they are ſuſceptible of all the unhappy conſequences of compreſſion.

Fractures of the ſmall bones of the foot incurable.

That it is to no purpoſe to keep horſes who have any fractures, except in the foot-bone, which is capable of uniting; becauſe it has ſo little motion, and is ſo firmly ſecured. There can be no hopes of curing the fractures of the nut and coronary bones, as we do the ruptured tendo achilles, for all their articulations are in continual motion; and if by chance they ſhould unite, the horſe would ſtill be inevitably lame, by the callus formed in the joint.

Compreſſions of bad conſequence without proper care.

That in caſes of all ſtrong compreſſions upon the fleſhy ſole, againſt the horny ſole, which is an expanſion of the muſcles and tendons of the foot, the inflammations will oſſify the joints of the foot, by the ſtagnation of the fluids; unleſs care be taken in time to diſperſe it by medicines, or drawing the ſole.

CHAP.

CHAP. II.

Reflections on shoeing HORSES.

The horse worthy the study of men of letters.

IT is no small pleasure to observe, that so useful an animal as the horse, is not thought unworthy the study, and even manual assistance, of men of reading, anatomical knowledge, and a capacity to form their practice upon judicious and well conducted experiments: the observations in the former chapter sufficiently confirm our assertion, nor will the subsequent ones in this, give the curious reader a less favourable opinion of M. La Fosse's abilities, who seems to be a perfect master of his subject; as the points he treats on are a set in a new light, and are very material to the preservation of the animal he patronizes.

Shoeing horses an important affair.

Indeed the affair of shoeing horses is so important in its consequences, both for the preservation of the foot, the safety of the legs, and the ease of their motion, that we cannot be too attentive to any innovations that may be recommended to us in this respect; we shall therefore give

give that gentleman's sentiments on this subject, with such animadversions as have occurred to us.

In order to understand this new method of shoeing, it is necessary first to premise the following observations, and attend to the anatomical plates before referred to.

Shoes not intended by nature.

It is most certain, that all horses, except such as have their feet overgrown, or such as may have a particular occasion of being shod to preserve the sole, may, at any rate, go without shoes; and there are many examples, without mentioning the customs of Arabia, or Tartary, of horses who are daily at work, without the least need of ever being shod: but as we employ all our care and address to hollow the foot, by paring it even to the quick, and to form an exact fine frog, it becomes absolutely necessary to set shoes on them.

Shoeing first contrived to preserve the hoof.

The original design of shoeing horses, was undoubtedly intended, as a preservative of the hoof, and a defence of the sole; but no one sure could think it necessary to pare away what he wanted

to preſerve by the uſe of the ſhoes; becauſe that would be to act contrary to his firſt principles, and deſtroy his own work.

The abſurdity of paring the ſole.

This precaution could never be recommended, but in caſes where the horny ſole is uneven, inſomuch that the ſhoe could not bear equally upon it, which would take off from its neceſſary firmneſs; in ſuch a caſe it may be reaſonable, otherwiſe it would be very abſurd.

Let us now obſerve the going, as well as the external and internal ſtructure of a horſe's foot.

How different horſes preſs on the foot.

The horſe then who draws, preſſes firſt on the toe, then ſucceſſively on the ſides, to eaſe the toe; then the horſe's heel yields upon the heel of the ſhoe, from which it immediately riſes again.

The ſaddle, or pack-horſe, places the toe but lightly, ſo that the point of ſupport is fixed neither upon the heel or toe, but between both; which it is eaſy to demonſtrate anatomically. Fig. 1. Plate II.

Thus

Thus the cannon-bone 3, presses on the pastern 4, this on the coronary 5, the coronary upon the coffin, or foot-bone 6, and upon the nut-bone 3, Fig 2. How the bones of the foot are actuated.

By this description of the bones, we may observe two essential things, which lay open the faults in the present method of shoeing, and point out the means of being able to remedy them for the future; one is, that the effort of the weight of a horse does not bear either upon the toe or heel, but on the middle between both; the other shews the greater the distance of the sole from the ground, or from whatsoever point of support, the more the pushing the coronary bone upon the nut-bone will fatigue the nerve or tendon upon which it rests, by the inordinate distension it undergoes at every step the horse takes. Where the weight of the horse bears.

Thus we see, that by hollowing away the sole in paring, the horse is sustained only upon the walls of the hoof, which having no assistance of support from the horny sole, is immediately worn, and battered by the weight of the horse's body; and the sooner he treads upon By paring away the sole, it is sustained on the hoofs.

any hard ſubſtance the ſooner he grows quite lame.

Other inconveniencies from paring the ſole.

For by the connection, thickneſs, and flexibility, as well as contexture of the horny ſole, it ſeems to be wholly deſtined by nature to ſerve as a cuſhion to the fleſhy ſole and tendon, which reſts upon it in order to break the violent ſhocks of a pavement, ſtone, or any kind of ſtump, or external violence; but by paring it away in the cuſtomary manner, the horſe loſes his defence of nature againſt ſtumps, nails, glaſs, *&c.* and thus the fleſhy ſole becomes eaſily bruiſed, or wounded.

Why the horſe goes uneaſy, when the frog is not in contact with the ground.

It is obſervable, that a horſe ſeldom goes eaſy or eſcapes being ſoon jaded, if the frog does not bear upon the ground, as it is the only point of ſupport to the tendon; ſo that if you keep it at any diſtance from the ground, by paring it away, an inordinate diſtenſion will happen to the tendon; which being repeated at every ſtep he goes, fatigues it, and cauſes an inflammation; whence alſo relaxations, defluxions, and tendinous ſwellings, eſpecially after long journeys, or hard riding, which are occaſioned more by the paring of the ſole, than the length

length of the journey; experience has ſhewn, that the frog neither ſuffers, or has ſhewn the leaſt ſign of fatigue or ſenſibility, by being thus expoſed: and indeed, from the ſtructure of it, it is ſcarce poſſible; for being of a ſoft, ſpongy, flexible ſubſtance, by its natural elaſticity it yields to the weight of the body the inſtant the horſe preſſes his feet to the ground, and immediately recovers it again: however, there is one caſe, whereby the frog may occaſion lameneſs, which is, when it grows hard or dry; but by taking off the little end of the frog, this diſorder is ſoon remedied.

The frog receives no injury by being expoſed.

As the bad conſequences of paring away the ſole and frog have been pointed out, and, I think evidently proved, let us obſerve now the ill effects of modern ſhoing; for it is upon the form of the ſhoes, and manner of ſetting them on, that not only the preſervation of the foot, but alſo the ſafety of their legs, and the eaſe of their motion depends.

The effects of modern ſhoeing.

In effect the more eaſy our ſhoes ſet upon us, the more active we are; ſo a large, long, thick ſhoe, ought to have the ſame effect upon horſes, that wooden

ſhoes have upon us; that is, make them heavy, unwieldy, and hobbling.

The inconvenience of long ſhoes.

A long ſhoe is not only perfectly uſeleſs, put it is even prejudicial; for the horſes heels coming to ſink upon thoſe of the ſhoes, the longer the lever, the greater will be the drag upon the clinches of the nails of the toe; and thus horſes will be more apt to ſtrike them off on many occaſions, eſpecially when they are apt to over-reach.

Of wide ſhoes alſo.

The longer the ſhoe is, and the more it covers the ſole, the more liable the horſe would be to fall, trip, and hobble in his walk: particularly if he goes on a pavement; becauſe the ſurface being formed of round parts, and the ſhoe having a large uniform hard face, he can ſcarce have above two or three points of ſupport.

Strong ſhoe-heels are very uneaſy to the horſe, and why.

It is thought by ſome, that ſtrong ſhoe-heels are an eaſe to the weak heels, and fetlocks of horſes; as if the body of the ſhoe was flexible enough to yield to the horſe's heel; and under this notion they raiſe the ſhoe-heel, and leave a vacant ſpace between that and the horſe's heel; but the direct contrary happens, for it is

is the hoof that, by its flexibility, yields to the ſhoe-heel, which is quite inflexible; the thicker the ſhoe-heel is, the more ſubject that of the horſe is to meet it, and inſtead of being eaſed, the horſe's heel becomes more compreſſed, as if in a conſtant vice, becauſe it has always the ſame point of ſupport.

By this means they deprive them of the liberty of going with eaſe upon a pavement; becauſe the ſhoe does not bear upon a level, and produces an effect, like that of a pivot, upon the middle of the ſhoe-heels, and the vault or hollow.

M. La Foſſe's method of ſhoeing.

To obviate theſe inconveniencies, M. La Foſſe propoſes the following method of ſhoeing; that neither the ſole or frog ſhould be pared at all; for neither will ever become too large by its growth; but in proportion as it grows, it will dry, ſcale, and fall off in flakes; that the edge of the hoof, if thought too long, ſhould be taken down as uſual; and then a ſhoe, in form of a half moon, ſet on, reaching the middle of the hoof; the heels may be thinned, and the ſhoes made a little longer for ſuch horſes as have weak hoofs.

Eight small nails, made in the old way, that is, having very small heads, are incrusted in the holes, which are made, as the head is, in an oblong form; the figures both of the shoe and nail are to be seen in the first anatomical plate. This is the whole mystery.

The advantage of this method.

By this method the sole is preserved, and consequently the foot defended against hard or sharp bodies, which the horse may chance to tread on: thus inflammations, and dangerous compressions, are avoided, and the many inconveniences already mentioned, from the lodgment of sand, gravel, or stones.

Other advantages.

Another advantage arising from this method of shoeing, and preserving the sole, that natural defence against external injuries, is, that in not paring away the sole, nor setting on any more shoe than is necessary to preserve the horny sole, the horse will not be subject to slip, either on the winter's icy pavement, or the dry smooth one of the summer.

The use of the frog and heel, when they touch the ground.

For by making a horse walk upon the frog, and partly upon the heel, the former being strongly rubbed, and pushed against

against the ground, or pavement, impresses itself, as it were, by the weight of the horse's body, into the inequalities and interstices it happens to meet in its way; by this means, the foot resting on a great many more parts, which mutually ease it, by multiplying the points of support, gives the animal a stronger adherence, and more security upon the place he goes.

The injury the air does the sole when pared.

By paring away the sole, the air, when it is in this thin state, penetrates, and dries it to such a degree, that by its contraction it compresses the fleshy sole, so as to lame the horse.

Other injuries to the foot, by paring the sole.

By this means, also, sand and gravel get in, and are ground between the sole and shoe; and again between the horse's heel and those of the shoe; which not readily coming out again, cause compressions, inflammations, *&c.* which last accidents are very often the effects of a stone's being wedged in between the shoe-heels.

To recapitulate the whole.

The weight of the saddle-horse does not press upon the toe or heel, but on the

the middle between both; so that the greater the distance of the sole from the ground, or from whatever point of support, the more the great tendon will be fatigued, by the inordinate distention it undergoes at every step.

The larger the horse's shoes, the less firm he goes.

The more the sole is covered by the shoe, the more the horse will slip, slide, or fall; because the surface being formed of round parts, and the shoe having a large uniform hard face, he can scarce have above two or three points of support; so that the greater contact the horse's foot has with the ground, the more points are multiplied; and the safer of consequence he goes.

By shoeing, no other intention could be expected, but preserving the hoof, after paring away its luxuriancy.

That long shoes, and raising the shoe-heel, is a very pernicious custom.

Many inconveniencies from paring the sole.

By paring away the horny sole, it hardens in proportion to its being thinned, and by compressing the fleshy sole, makes a horse lame; he loses also the defence of nature against external bodies, by

by which means the fleshy sole becomes often wounded, bruised, *&c.*

By paring the frog so much away, that it is not in contact with the ground, the tendon will be inordinately distended; by which means, it becomes subject to inflammation, relaxation, defluxion, and rupture. Also from paring the frog.

Lastly, It appears from the anatomy of the foot, that horses are chiefly lame in those bones and its tendon; that the present method of shoeing contributes greatly thereto, by paring away the horny sole, and hollowing the foot; by which means, the fleshy sole becomes more exposed to accidents, and the tendon fatigued, strained, and ruptured; its support being taken away by paring the frog. The present method of shoeing, contributes to the frequent lamenesses in the feet.

We may learn also from hence, that no more of the toe should be pared away, than to keep the foot uniform with the shoe; that the shoe should be made flat, in order to adapt itself the better to the foot; not made too thick or hollow, nor projecting beyond the horse's heel. The shoe should be flat, not thick or hollow.

This,

This is the substance of M. La Fosse's new method of shoeing; which from its simplicity, and the great ease of performing it, seems to demand our regard and attention: but though it appears well calculated for the flat pavements and roads of France, yet we doubt its general success with us; especially in some of our rough stony countries, where the heel and frog, being left so entirely defenceless, might be liable to frequent injuries from such irregular loose bodies, as flints, loose stones, *&c.* We should suspect also its success on moist, greasy, and slippery soils or chalks; where the shoe-heel, or cramps seems of great use to support a horse, by the impression it makes in the surface, how inconvenient soever it may be in other respects; though it must be confessed, from our method of shoeing race horses, where the whole foot comes into immediate contact with the ground, notwithstanding the course they run over is often very slippery, yet they seldom fall.

Some objections to this method of shoeing.

But though this method may not be so generally adopted by us, in its utmost extent, for the reasons above given; as well as from the different texture of horses

Though not of general use here, yet has great merit.

horses feet, which in some will always demand a particular method of shoeing; yet it undoubtedly may suit many horses, and many different parts of the kingdom; and this particular advantage every one may reap from it, *viz.* to pare away as little of the sole and frog, as possible, even in the old method of shoeing: the many inconveniencies of which, we apprehend, have been sufficiently pointed out, and amply explained; and would by this means, be in a great measure obviated.

EXPLA-

EXPLANATION *of the Anatomical* FIGURES.

PLATE *the First.*

THE first figure represents the bottom of a horse's foot.

a, *a*, *a*, is the horny sole.

b, the frog.

2. The *hoof* towards its lower edge, called by the author *the wall of the foot.*

Figure the second, shews the horny sole *a*, raised from the fleshy sole *c*, *c*, *c*, round which is the enchannelled flesh, 6. placed in the sulcus of the inner surface of the hoof, 5. the horny part of which is soft and white.

Figure the third represents the under part of the fleshy sole *c*, raised from the foot-bone * *d*, *d*, *d*, *g*, the covering or sheath of the *Tendo-Achilles*. 2. The cartilage. 6. The edge of the fleshy sole confined in the furrow of the channelled horny substance.

* The foot-bone is Gibson's *Coffin-bone.*

Expla-

The new half Moon Shoe

The Nail for the Shoe

Fig. 3

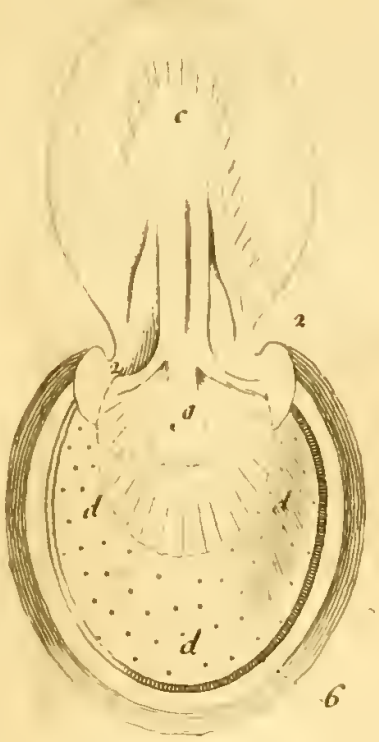


Fig. 2

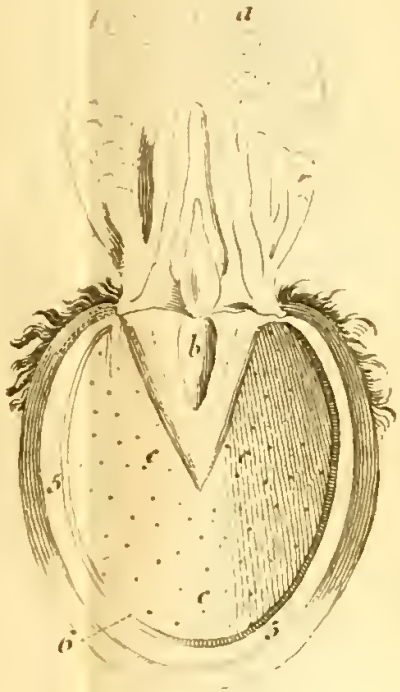


Fig. 1

Fig. 8.

Fig. 7.

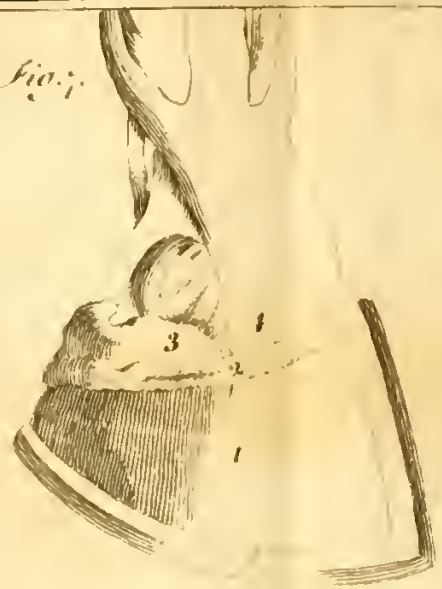
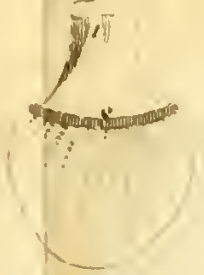


Fig. 4.

Fig. 5.

Fig. 6.



Explanation of the Figures of the Second Plate.

The fourth figure ſhews a back view of the leg.

7. The ſkin laid open, in order to view the inner ſoft parts belonging to the articulations.

8. The apneurotic membrane, formed of different laminæ, which ſeperate the muſcles and cutaneous tendons.

9. and 3. Are partly the covering of the flexor tendon of ——-

5. The coronary bone *, which ſerves as a covering to the *Tendo-Achilles*, 10.

11. The ligament of the cannon-bone, the paſtern and the coronary bones.

16. The cup or capſula of the tendon of the coronary bone.

18. The cannon-bone †.

6. The foot-bone.

Figure the fifth is the ſame leg, and in the ſame view.

2. The foot-bone.

* The coronory bone is the little paſtern of Gibſon.

† French authors call thoſe bones *Cannon-bones*, both before and behind, which Gibſon calls in the fore legs, the *Shank-bones*, and in the hind legs, the *Inſtep-bones*.

1. The

1. The *Tendo-Achilles*, diſſected to ſhew the coronary bone. 6.

3. The nut bone *.

4. The concave part of the foot-bone to which the tendon is fixed.

7. The ligament of the foot-bone with the nut-bone.

8. The ligament of the tendon with the nut-bone.

Figure the ſixth, repreſents the *Tendo-Achilles* raiſed and ſeparated from figure 5, to ſhew the lamina 8, which ſerves as a ligament to the nut-bone of the ſame figure.

Eigure the ſeventh, ſhews the enchannelled fleſh. 1. The wall or hoof being raiſed from it. 2. The rough border that ſurrounds the enchannelled fleſh above the hoof.

3. The cartilage of the foot.

4. The extenſor tendon of the foot.

Figure the eighth, demonſtrates the bone of the foot Z; the enchannelled fleſh of which is raiſed with the cartilage.

* The nut-bone, called by the French, *Os de la noix*, is a little oblong bone placed acroſs at the junction of the little and great paſterns behind, which is not taken notice of by Gibſon.

5. The

Fig. 9.

Fig. 3.

Fig. 5.

Fig. 8.

Fig. 2.

Fig. 6.

Fig. 4.

Fig. 1.

Fig. 7.

I. Basire fc.

5. The ligament of the coronary-bone with that of the foot.

3. and 4. The extenſor tendon of the foot.

The Third Plate, containing Figures of the oſteology and fracture of the bones.

Figure the firſt, repreſents a fore view of the leg.

3. The cannon-bone cut acroſs at the upper end.

4. The paſtern-bone.

5. The coronary-bone.

6. The foot-bone.

The ſecond figure is a back view of the ſame leg.

8. The cannon-bone.

4. The paſtern.

5. The coronary-bone.

3. The nut-bone, which cannot be ſeen in a fore view.

6. The foot, or coffin-bone.

The third figure is another back view of the ſame leg.

16. The place where the artery divides into two branches.

4. The holes into which theſe two branches paſs in the foot.

5. The diſtribution of theſe two branches round the foot.

6. The foot-bone.

The fourth figure is the coronary-bone viewed anteriorly with the marks of its fractures, 1, 2, 3.

The fifth figure is the ſame coronary-bone in a back view, with the appearance of the ſame fractures, 1, 2, 3.

The ſixth is the nut-bone fractured into three parts, 4, 5, 6.

The ſeventh ſhews the ſame bone fractured into two, 4, 4.

The eighth is a figure of the foot-bone viewed on its upper ſurface fractured in two, with the mark of the fracture, 6, 7

The ninth is a view of the under ſurface of the ſame bone, with the fracture marked 6, 7. This bone is very ſpongy.

THE

THE

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